



Ecological Regions of Idaho

Chapter Goals:

After completing this chapter, volunteers should be able to:

- Identify and differentiate the features of Idaho's Ecoregions and Ecological Sections
- Understand and communicate the need for different maps denoting various ecological regions of Idaho
- Explain the factors creating the great ecological diversity occurring in Idaho

Ecoregions and Ecological Sections

Idaho comprises five ecoregions: the **Canadian Rocky Mountains** in the northern part of the state, the **Middle Rockies–Blue Mountains** across the central part of the state, the **Columbia Plateau** that follows the Snake River across the state, the **Utah–Wyoming Rocky Mountains** along the southeastern boundary of the state, and the smaller **Wyoming Basins** in the southeastern corner of the state. These ecoregions are sub-divided into fourteen ecological sections: the Okanogan Highlands, Flathead Valley, Bitterroot Mountains, Blue Mountains, Idaho Batholith, Challis Volcanics, Beaverhead Mountains, Palouse Prairie, Owyhee Uplands, Snake River Basalts, Northwestern Basin and Range, Yellowstone Highlands, Overthrust Mountains and Bear Lake.



[Coeur d'Alene, Idaho and Lake Coeur d'Alene.](#)
[Photo courtesy, Idaho Travel Council.](#)

Canadian Rocky Mountains Ecoregion

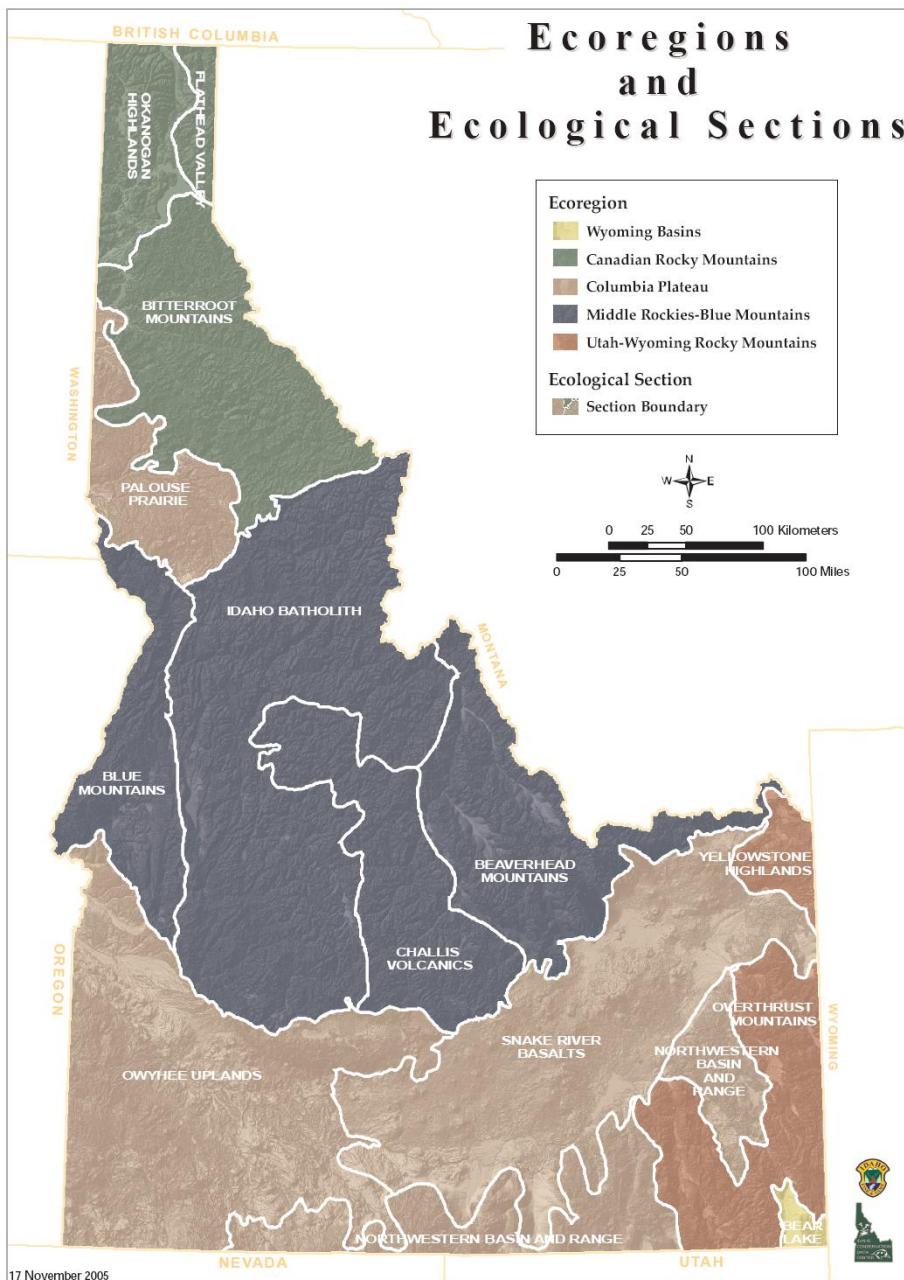
The Canadian Rocky Mountains Ecoregion extends over a large portion of the Rocky Mountains from southeastern British Columbia and southwestern Alberta to northern Idaho and northwestern Montana. The Idaho portion of this ecoregion is comprised of three ecological sections: the Okanogan Highlands, Flathead Valley, and Bitterroot Mountains. Elevation in the entire ecoregion



[A young woodland Caribou.](#)
[Photo courtesy, IDFG.](#)

ranges from 915 to 3954 m (3000 to 12,972 ft). Geologically, this ecoregion is complex, containing bedrock of sedimentary, igneous, and metamorphic origin largely characterized by steep glaciated overthrust mountains with sharp alpine ridges and cirques at higher elevations. Historic and current glaciation has sculpted the mountainous landscape filling many of the intermountain valleys with glaciofluvial deposits and moraines.

Vegetation in this ecoregion is dominated by coniferous forests with structure largely dictated by elevation. This ecoregion is best recognized for its full complement of large mammals—one of the few places left in North America that can make this claim



Middle Rockies–Blue Mountains Ecoregion

The Middle Rockies–Blue Mountains Ecoregion is characterized by a large mass of mountains and intermontane valleys covering major portions of Oregon, Idaho, and Montana and a small part of Washington. Although the Middle Rockies–Blue Mountains ecoregion is consistent in terms of broad climate, physical and biological patterns, it is remarkably diverse when viewed at finer scales. In Idaho, four ecological sections are represented in this ecoregion: the Blue Mountains, Idaho Batholith, Challis Volcanics and Beaverhead Mountains.

The relatively arid lowlands of the Columbia Plateau and Northern Great Plains Ecoregions lie to the west, south, and east, while the Canadian Rocky Mountains and Utah–Wyoming Rocky Mountains Ecoregions lie north and south along the cordillera. The ecoregion covers 81,587 square miles (52,215,958 acres) and, by comparison, is only slightly smaller than the state of Idaho. While the ecoregion is topographically diverse, it can generally be characterized as rugged. Abrupt elevational changes of 3,000 to 4,000 feet from valley floors to mountain summits are not uncommon. At the extreme is Hells Canyon of the Snake River, along the Oregon–Idaho border, where, in the deepest part, the elevation drops 8,000 feet in just four miles. The lowest elevation in the ecoregion is 790 feet, where the Snake River flows out of Hells Canyon south of Lewiston, Idaho, while the highest occurs on Borah Peak at 12,662 feet, in the Lost River Range of central Idaho (TNC 2000).



Sawtooth Mountains in central Idaho.
Photo courtesy, Idaho Travel Council.



The Pygmy rabbit, species found throughout the Columbia Plateau Ecoregion. Photo courtesy Wendy Estes-Zumpf.



Three Island Crossing State Park.
Photo courtesy, Idaho Travel Council.

Columbia Plateau Ecoregion

The Columbia Plateau Ecoregion is characterized by a broad expanse of sagebrush covered volcanic plains and valleys, punctuated by isolated mountain ranges and the dramatic river systems of the Snake, Owyhee, Boise and Columbia. Covering 301,329 km², the Columbia Plateau stretches across the sagebrush steppe of southern Idaho, connecting the Columbia Basin of eastern Washington and Oregon to the northern Great Basin of Nevada, Utah and California. State representation in the ecoregion is varied with Oregon having the largest percentage of the area at 32%, followed closely by Idaho.

Nevada and Washington have similar representations (17–18%) but California, Utah and Wyoming have only minor area within the ecoregion. Four ecological sections are represented in the Idaho portion of this ecoregion: the Palouse Prairie, Owyhee Uplands, Snake River Basalts, and Northwestern Basin and Range (Andelman et al. 1999).



Silver City historic mining town nestled in the Owyhee Mountains in SE Idaho
Photo courtesy, Idaho Travel Council.

Utah–Wyoming Rocky Mountains Ecoregion

The Utah–Wyoming Rocky Mountains Ecoregion includes the mountains just north of Yellowstone National Park in south-central Montana, the Bighorn Mountains in northeast Wyoming, the Uinta Mountains of northeast Utah and Northwest Colorado, Utah's Wasatch Range, and the mountains and valleys of the southeastern corner of Idaho, generally east of Interstate 15. Two ecological sections comprise the Idaho portion of this ecoregion: the Yellowstone Highlands and Overthrust Mountains. Embedded in this vast area is the Greater Yellowstone Ecosystem (GYE), with Yellowstone National Park as its focal point. The GYE is considered one of the last intact temperate ecosystems on Earth, and the farthest south in North America. Yellowstone is an extraordinary place containing the greatest concentration of geysers, hot springs, and other thermal features in the world. Not surprisingly, it is a World Heritage Site (Noss et al. 2001).



A fall scene near Palisades Reservoir in SE Idaho. Photo courtesy, IDFG

Wyoming Basins Ecoregion

The Wyoming Basins Ecoregion comprises 51,605 square miles (33 million acres or 13.3 million hectares) of basin, plain, desert, and “island” mountains in Wyoming, Montana, Idaho, Colorado, and Utah. Considered by Bailey (1995) as part of the Intermountain Semidesert Province, TNC scientists decided to detach the Wyoming Basins, in part because of the vegetational differences between Wyoming and points west.

Although the entire area is dominated by sagebrush species, many of which are common, the Wyoming Basins contains blue grama grass (basically a Great Plains species), which the Great Basin deserts lack. Rhizomatous grasses like western wheatgrass are more common in Wyoming than in the Great Basin desert. The separation from the Intermountain Province was also made to simplify TNC's ecoregional planning process. Unusual rock formations, sand dunes, and



A grizzly bear in a meadow.
Photo by Terry Tollefsbol, USFWS.

saltbush communities also characterize the ecoregion. Mountains rising from the basins are timbered with limber pine, Douglas fir and stands of aspen. Only one ecological section occurs in the Idaho portion of this ecoregion—Bear Lake—which is home to 4 endemic fish species including Bear Lake whitefish, Bonneville cisco, Bonneville whitefish, and Bear Lake sculpin (Freilich et al. 2001).

Canadian Rocky Mountains Ecoregion

Okanogan Highlands Ecological Section

Glacial lakes, rivers and streams are prevalent in this mountainous area. Rivers and streams are rapid flowing, particularly during spring runoff. The Pend Oreille

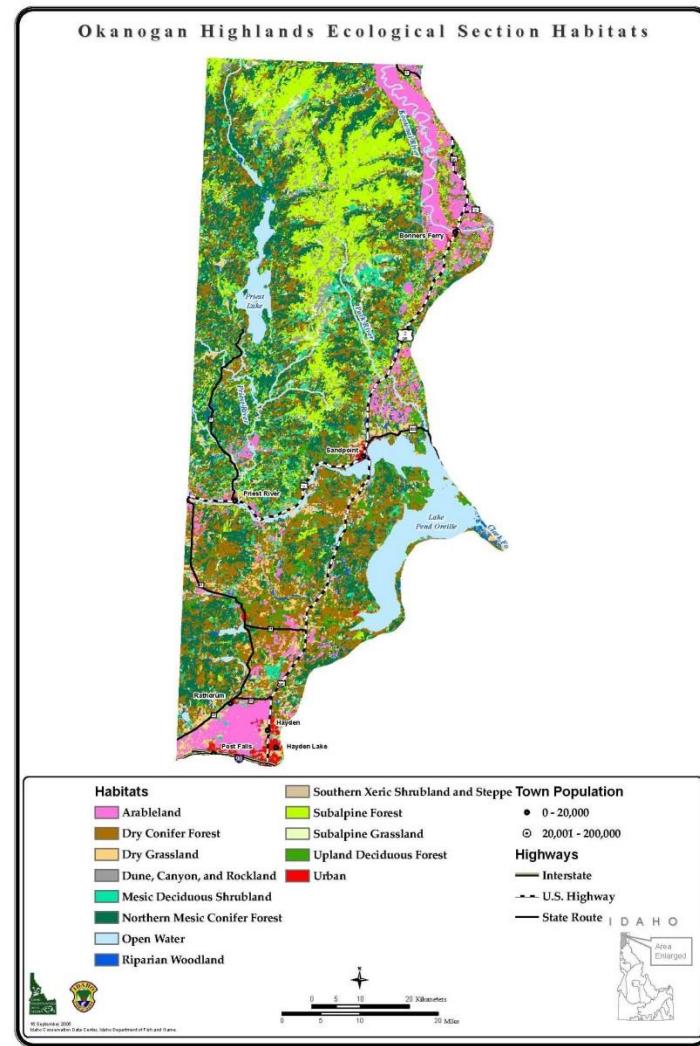
River, Pend Oreille Lake, and Priest Lake are major water bodies. Creeks are prevalent and many flow through glacial outwash and debris material within narrow valleys, and glacial lakes and wet meadows are common. Rock strata are characterized by extreme metamorphism and deformation, and deposits of glacial till, outwash, and debris cover much of the landscape.

The climate is maritime-influenced. Precipitation occurs mostly as snow. The area receives 76 to 203 cm (30–80 in) of precipitation per year. Rain or snow is common at lower elevations. June and July are wet months and the months of August through November are dry. Annual average temperature ranges from –1°–14°C (30°–58°F) with a mean temperature of 7°C (44°F).

Warmest months are late July



Bear Lake National Wildlife Refuge, in SW Idaho. Photo courtesy, Colleen Moulton, IDFG.



through August. The growing season varies with elevation, lasting 45 days at the highest elevations and up to 140 days in lower valleys.

Communities are mostly small and rural, but populations and development in some municipalities have been greatly increasing during recent years. Sandpoint, Bonners Ferry, and Post Falls are the largest population centers. Summer residences are common at lakes and large river systems. Forestry, livestock grazing, mining, and localized agriculture are principal land uses. Participation in outdoor recreation is rapidly increasing.

| LAND USE | AREA (ha) | AREA (ac) | PERCENT |
|---------------------|----------------|------------------|------------|
| Dryland Agriculture | 185,013 | 457,176 | 28 |
| Timberland | 394,573 | 975,007 | 59 |
| Rangeland | 39,325 | 97,174 | 6 |
| Urban | 6847 | 16,920 | 1 |
| Water | 46,506 | 114,919 | 7 |
| Total | 672,265 | 1,661,195 | 100 |

| LAND OWNERSHIP | AREA (ha) | AREA (ac) | PERCENT |
|--------------------------------|----------------|------------------|------------|
| USDI Bureau of Land Management | 7250 | 17,915 | 1 |
| USDA Forest Service | 205,736 | 508,383 | 31 |
| Open water | 50,787 | 125,497 | 8 |
| Private | 299,410 | 739,854 | 45 |
| State of Idaho | 107,994 | 266,857 | 16 |
| USDI Fish and Wildlife Service | 1087 | 2685 | <1 |
| Total | 672,263 | 1,661,192 | 100 |

Table 1: Okanogan Highlands Land Use and Land Ownership

Species of Greatest Conservation Need in the Okanogan Highlands

Fishes

White Sturgeon (Kootenai River system) *Acipenser transmontanus*^a

Lake Chub *Couesius plumbeus*^a

Westslope Cutthroat Trout *Oncorhynchus clarkii lewisi*^a

Inland Redband Trout *Oncorhynchus mykiss gairdneri*

Kokanee *Oncorhynchus nerka*^a

Pygmy Whitefish *Prosopium coulterii*^a

Bull Trout *Salvelinus confluentus*^a
Burbot *Lota lota*^a

Amphibians

Northern Leopard Frog *Rana pipiens*
Wood Frog *Rana sylvatica*^a
Coeur d'Alene Salamander *Plethodon idahoensis*

Reptiles

Northern Alligator Lizard *Elgaria coerulea*

Birds

Northern Pintail *Anas acuta*^a
Lesser Scaup *Aythya affinis*
Harlequin Duck *Histrionicus histrionicus*^a
Hooded Merganser *Lophodytes cucullatus*^a
Common Loon *Gavia immer*^a
Red-necked Grebe *Podiceps grisegena*^a
Western Grebe *Aechmophorus occidentalis*^a
Bald Eagle *Haliaeetus leucocephalus*
Merlin *Falco columbarius*
Peregrine Falcon *Falco peregrinus*
Upland Sandpiper *Bartramia longicauda*
Long-billed Curlew *Numenius americanus*
Wilson's Phalarope *Phalaropus tricolor*
Forster's Tern *Sterna forsteri*
Black Tern *Chlidonias niger*^a
Flammulated Owl *Otus flammeolus*
Short-eared Owl *Asio flammeus*
Boreal Owl *Aegolius funereus*
Black Swift *Cypseloides niger*
Lewis's Woodpecker *Melanerpes lewis*
White-headed Woodpecker *Picoides albolarvatus*
American Three-toed Woodpecker *Picoides dorsalis*
Pygmy Nuthatch *Sitta pygmaea*
White-winged Crossbill *Loxia leucoptera*^a

Mammals

Pygmy Shrew *Sorex hoyi*^a
Merriam's Shrew *Sorex merriami*^a
Fringed Myotis *Myotis thysanodes*
Townsend's Big-eared Bat *Corynorhinus townsendii*
Red-tailed Chipmunk *Neotamias ruficaudus*^a
Northern Bog Lemming *Synaptomys borealis*^a
Gray Wolf *Canis lupus*
Grizzly or Brown Bear *Ursus arctos*^a

Fisher *Martes pennanti*^a
 Wolverine *Gulo gulo*
 Canada Lynx *Lynx canadensis*
 Caribou *Rangifer tarandus*^a
 Mountain Goat *Oreamnos americanus*

Gastropods
 Sheathed Slug *Zacoleus idahoensis*

Insects
 A Stonefly *Pictetiella expansa*^a

^a Species for which the Okanogan Highlands represents a significant portion of their Idaho range.

Habitats in the Okanogan Highlands

| HABITAT | AREA (km ²) | AREA (ac) | PERCENT |
|-------------------------------|-------------------------|------------------|------------|
| Urban | 61 | 14,994 | 1 |
| Arableland | 483 | 119,467 | 7 |
| Upland Deciduous Forest | 304 | 75,197 | 5 |
| Dry Conifer Forest | 1648 | 407,175 | 25 |
| Northern Mesic Conifer Forest | 1410 | 348,217 | 21 |
| Subalpine Forest | 1009 | 249,450 | 15 |
| Mesic Deciduous Shrubland | 358 | 88,425 | 5 |
| Dry Grassland | 416 | 102,788 | 6 |
| Subalpine Grassland | 117 | 28,815 | 2 |
| Open Water | 514 | 127,023 | 8 |
| Riparian Woodland | 204 | 50,392 | 3 |
| Dune, Canyon, and Rockland | 199 | 49,259 | 3 |
| Total | 6723 | 1,661,202 | 100 |

Table 2: Okanogan Highlands Habitats

Priority Habitats and Associated Vertebrate Species in the Okanogan Highlands

Arableland

Fishes

White Sturgeon (Kootenai River system) *Acipenser transmontanus*
Westslope Cutthroat Trout *Oncorhynchus clarkii lewisi*
Burbot *Lota lota*

Birds

Northern Pintail *Anas acuta*
Merlin *Falco columbarius*
Long-billed Curlew *Numenius americanus*

Dry Conifer Forest

Fishes

White Sturgeon (Kootenai River system) *Acipenser transmontanus*
Lake Chub *Couesius plumbeus*
Kokanee *Oncorhynchus nerka*
Pygmy Whitefish *Prosopium coulterii*
Bull Trout *Salvelinus confluentus*

Amphibians

Northern Leopard Frog *Rana pipiens*
Wood Frog *Rana sylvatica*
Coeur d'Alene Salamander *Plethodon idahoensis*

Birds

Harlequin Duck *Histrionicus histrionicus*
Bald Eagle *Haliaeetus leucocephalus*
Merlin *Falco columbarius*
Peregrine Falcon *Falco peregrinus*
Boreal Owl *Aegolius funereus*
White-headed Woodpecker *Picoides albolarvatus*
American Three-toed Woodpecker *Picoides dorsalis*
Pygmy Nuthatch *Sitta pygmaea*
Grasshopper Sparrow *Ammodramus savannarum*

Mammals

Fringed Myotis *Myotis thysanodes*
Townsend's Big-eared Bat *Corynorhinus townsendii*
Red-tailed Chipmunk *Neotamias ruficaudus*
Grizzly or Brown Bear *Ursus arctos*
Fisher *Martes pennanti*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*
Caribou *Rangifer tarandus*
Mountain Goat *Oreamnos americanus*

Northern Mesic Conifer Forest

Fishes

White Sturgeon (Kootenai River system) *Acipenser transmontanus*
Lake Chub *Couesius plumbeus*
Kokanee *Oncorhynchus nerka*
Pygmy Whitefish *Prosopium coulterii*
Bull Trout *Salvelinus confluentus*
Burbot *Lota lota*

Amphibians

Northern Leopard Frog *Rana pipiens*
Wood Frog *Rana sylvatica*
Coeur d'Alene Salamander *Plethodon idahoensis*

Birds

Harlequin Duck *Histrionicus histrionicus*
Bald Eagle *Haliaeetus leucocephalus*
Peregrine Falcon *Falco peregrinus*
Boreal Owl *Aegolius funereus*
Black Swift *Cypseloides niger*
Pygmy Nuthatch *Sitta pygmaea*
White-winged Crossbill *Loxia leucoptera*

Mammals

Pygmy Shrew *Sorex hoyi*
Fringed Myotis *Myotis thysanodes*
Townsend's Big-eared Bat *Corynorhinus townsendii*
Red-tailed Chipmunk *Neotamias ruficaudus*
Northern Bog Lemming *Synaptomys borealis*
Grizzly or Brown Bear *Ursus arctos*
Fisher *Martes pennanti*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*
Caribou *Rangifer tarandus*

Subalpine Forest

Fishes

Lake Chub *Couesius plumbeus*
Burbot *Lota lota*

Amphibians

Wood Frog *Rana sylvatica*

Birds

Bald Eagle *Haliaeetus leucocephalus*
Boreal Owl *Aegolius funereus*
White-headed Woodpecker *Picoides albolarvatus*
American Three-toed Woodpecker *Picoides dorsalis*
White-winged Crossbill *Loxia leucoptera*

Mammals

Pygmy Shrew *Sorex hoyi*
Northern Bog Lemming *Synaptomys borealis*
Grizzly or Brown Bear *Ursus arctos*
Fisher *Martes pennanti*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*
Caribou *Rangifer tarandus*
Mountain Goat *Oreamnos americanus*

Open Water

Fishes

Kokanee *Oncorhynchus nerka*
Pygmy Whitefish *Prosopium coulterii*
Bull Trout *Salvelinus confluentus*

Birds

Northern Pintail *Anas acuta*
Hooded Merganser *Lophodytes cucullatus*
Common Loon *Gavia immer*
Red-necked Grebe *Podiceps grisegena*
Western Grebe *Aechmophorus occidentalis*
Wilson's Phalarope *Phalaropus tricolor*
California Gull *Larus californicus*
Forster's Tern *Sterna forsteri*

Mammals

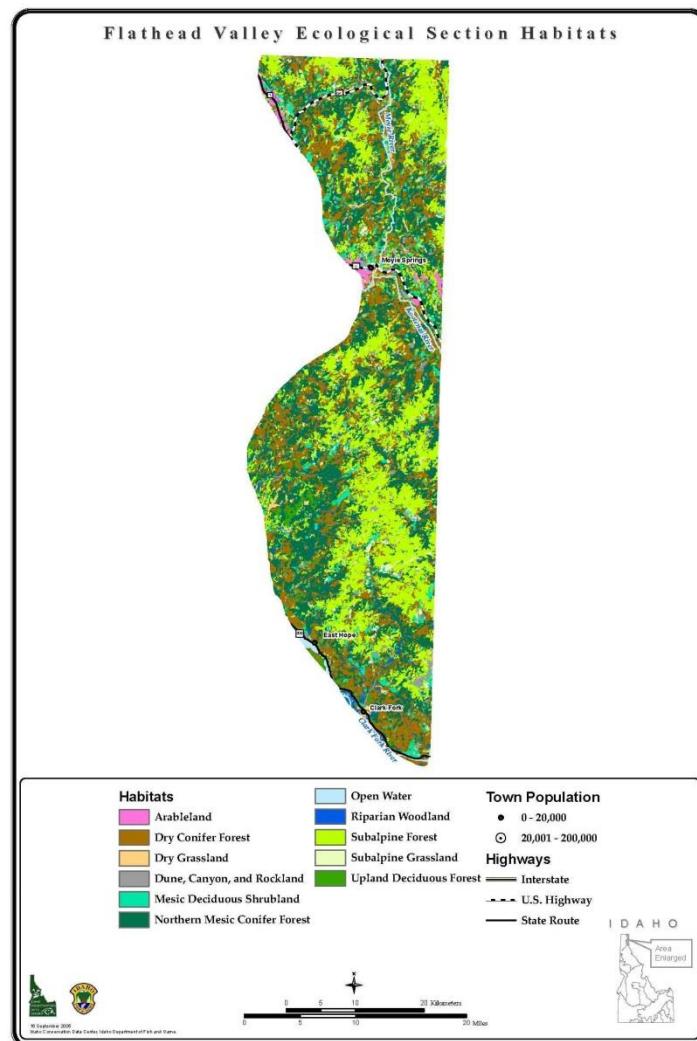
Townsend's Big-eared Bat *Corynorhinus townsendii*

Flathead Valley Ecological Section

The Purcell and Cabinet mountains are the dominant landforms.

Perennial streams are common, as well as small lakes, bogs, and wetlands. The Kootenai River and the Clark Fork River passing through are major water bodies. Soils are generally moderately deep to deep with loamy to sandy textures. Most of the soil contains volcanic ash.

Annual precipitation ranges from 46 to over 254 cm (18 to over 100 in); most of the precipitation falls as snow. Summers tend to be dry. Climate is cool-temperate with some maritime influence. Temperature averages 2–7°C (36–45°F), and the growing season ranges from 45 to 120 days. While maritime influences create relatively mild winter conditions, influxes of arctic air are frequent.



Communities are small and sparsely distributed. Timber harvest and recreation are important land uses, and livestock grazing and farming occur in some valley areas.

| LAND USE | AREA (ha) | AREA (ac) | PERCENT |
|---------------------|----------------|----------------|------------|
| Dryland Agriculture | 7,260 | 10,679 | 4 |
| Timberland | 196,039 | 288,382 | 96 |
| Water | 301 | 443 | <1 |
| Total | 203,601 | 299,505 | 100 |

| LAND OWNERSHIP | AREA (ha) | AREA (ac) | PERCENT |
|--------------------------------|----------------|----------------|------------|
| USDI Bureau of Land Management | 1,759 | 2,588 | 1 |
| USDA Forest Service | 143,115 | 210,528 | 70 |
| Open water | 1,066 | 1,567 | 1 |
| Private | 52,414 | 77,104 | 26 |
| State of Idaho | 5,320 | 7,826 | 3 |
| Total | 203,674 | 299,613 | 100 |

Table 3: Flathead Valley Land Use and Land Ownership

Species of Greatest Conservation Need in the Flathead Valley

Fishes

White Sturgeon (Kootenai River system) *Acipenser transmontanus*^a

Lake Chub *Couesius plumbeus*

Westslope Cutthroat Trout *Oncorhynchus clarkii lewisi*

Inland Redband Trout *Oncorhynchus mykiss gairdneri*

Kokanee *Oncorhynchus nerka*^a

Pygmy Whitefish *Prosopium coulterii*

Bull Trout *Salvelinus confluentus*^a

Burbot *Lota lota*^a

Amphibians

Northern Leopard Frog *Rana pipiens*

Wood Frog *Rana sylvatica*^a

Coeur d'Alene Salamander *Plethodon idahoensis*

Reptiles

Northern Alligator Lizard *Elgaria coerulea*

Birds

Northern Pintail *Anas acuta*

Harlequin Duck *Histrionicus histrionicus*

Hooded Merganser *Lophodytes cucullatus*

Common Loon *Gavia immer*

Red-necked Grebe *Podiceps grisegena*

Western Grebe *Aechmophorus occidentalis*

Bald Eagle *Haliaeetus leucocephalus*

Merlin *Falco columbarius*

Peregrine Falcon *Falco peregrinus*

Long-billed Curlew *Numenius americanus*

Flammulated Owl *Otus flammeolus*
 Boreal Owl *Aegolius funereus*
 Black Swift *Cypseloides niger*
 Lewis's Woodpecker *Melanerpes lewis*
 White-headed Woodpecker *Picoides albolarvatus*
 American Three-toed Woodpecker *Picoides dorsalis*
 Pygmy Nuthatch *Sitta pygmaea*
 White-winged Crossbill *Loxia leucoptera*^a

Mammals

Pygmy Shrew *Sorex hoyi*
 Townsend's Big-eared Bat *Corynorhinus townsendii*
 Red-tailed Chipmunk *Neotamias ruficaudus*
 Northern Bog Lemming *Synaptomys borealis*^a
 Gray Wolf *Canis lupus*
 Grizzly or Brown Bear *Ursus arctos*^a
 Fisher *Martes pennanti*
 Wolverine *Gulo gulo*
 Canada Lynx *Lynx canadensis*
 Caribou *Rangifer tarandus*^a
 Mountain Goat *Oreamnos americanus*

Gastropods

Fir Pinwheel *Radiodiscus abietum*
 Pygmy Slug *Kootenaia burkei*
 Sheathed Slug *Zacoleus idahoensis*

Insects

A Stonefly *Pictetiella expansa*^a

^a Species for which the Flathead Valley represents a significant portion of their Idaho range.

Habitats in the Flathead Valley

| HABITAT | AREA (km ²) | AREA (ac) | PERCENT |
|-------------------------|-------------------------|-----------|---------|
| Arableland | 204 | 5029 | 1 |
| Upland Deciduous Forest | 620 | 15,323 | 3 |
| Dry Conifer Forest | 5223 | 129,055 | 26 |

| HABITAT | AREA (km ²) | AREA (ac) | PERCENT |
|-------------------------------|-------------------------|----------------|------------|
| Northern Mesic Conifer Forest | 6020 | 148,766 | 30 |
| Subalpine Forest | 5416 | 133,829 | 27 |
| Mesic Deciduous Shrubland | 1133 | 28,006 | 6 |
| Dry Grassland | 296 | 7324 | 1 |
| Subalpine Grassland | 364 | 9005 | 2 |
| Open Water | 95 | 2358 | <1 |
| Riparian Woodland | 510 | 12,644 | 3 |
| Dune, Canyon, and Rockland | 478 | 11,804 | 2 |
| Total | 20,359 | 503,143 | 100 |

Table 4: Flathead Valley Habitats

Priority Habitats and Associated Vertebrate Species in the Flathead Valley

Dry Conifer Forest

Fishes

White Sturgeon (Kootenai River system) *Acipenser transmontanus*
 Lake Chub *Couesius plumbeus*
 Westslope Cutthroat Trout *Oncorhynchus clarkii lewisi*
 Kokanee *Oncorhynchus nerka*
 Pygmy Whitefish *Prosopium coulterii*
 Bull Trout *Salvelinus confluentus*
 Burbot *Lota lota*

Amphibians

Northern Leopard Frog *Rana pipiens*
 Wood Frog *Rana sylvatica*
 Coeur d'Alene Salamander *Plethodon idahoensis*

Birds

Harlequin Duck *Histrionicus histrionicus*
 Hooded Merganser *Lophodytes cucullatus*
 Bald Eagle *Haliaeetus leucocephalus*
 Merlin *Falco columbarius*
 Peregrine Falcon *Falco peregrinus*
 Boreal Owl *Aegolius funereus*

Black Swift *Cypseloides niger*
White-headed Woodpecker *Picoides albolarvatus*
American Three-toed Woodpecker *Picoides dorsalis*
Pygmy Nuthatch *Sitta pygmaea*
White-winged Crossbill *Loxia leucoptera*

Mammals

Pygmy Shrew *Sorex hoyi*
Townsend's Big-eared Bat *Corynorhinus townsendii*
Red-tailed Chipmunk *Neotamias ruficaudus*
Grizzly or Brown Bear *Ursus arctos*
Fisher *Martes pennanti*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*
Caribou *Rangifer tarandus*
Mountain Goat *Oreamnos americanus*

Northern Mesic Conifer Forest

Fishes

White Sturgeon (Kootenai River system) *Acipenser transmontanus*
Lake Chub *Couesius plumbeus*
Westslope Cutthroat Trout *Oncorhynchus clarkii lewisi*
Kokanee *Oncorhynchus nerka*
Pygmy Whitefish *Prosopium coulterii*
Bull Trout *Salvelinus confluentus*
Burbot *Lota lota*

Amphibians

Northern Leopard Frog *Rana pipiens*
Wood Frog *Rana sylvatica*
Coeur d'Alene Salamander *Plethodon idahoensis*

Birds

Harlequin Duck *Histrionicus histrionicus*
Bald Eagle *Haliaeetus leucocephalus*
Peregrine Falcon *Falco peregrinus*
Boreal Owl *Aegolius funereus*
Black Swift *Cypseloides niger*
Pygmy Nuthatch *Sitta pygmaea*
White-winged Crossbill *Loxia leucoptera*

Mammals

Pygmy Shrew *Sorex hoyi*
Townsend's Big-eared Bat *Corynorhinus townsendii*
Red-tailed Chipmunk *Neotamias ruficaudus*
Northern Bog Lemming *Synaptomys borealis*
Grizzly or Brown Bear *Ursus arctos*
Fisher *Martes pennanti*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*

Subalpine Forest

Fishes

White Sturgeon (Kootenai River system) *Acipenser transmontanus*
Westslope Cutthroat Trout *Oncorhynchus clarkii lewisi*
Kokanee *Oncorhynchus nerka*
Bull Trout *Salvelinus confluentus*
Burbot *Lota lota*

Amphibians

Wood Frog *Rana sylvatica*

Birds

Harlequin Duck *Histrionicus histrionicus*
Bald Eagle *Haliaeetus leucocephalus*
Peregrine Falcon *Falco peregrinus*
Boreal Owl *Aegolius funereus*
Black Swift *Cypseloides niger*
White-headed Woodpecker *Picoides albolarvatus*
American Three-toed Woodpecker *Picoides dorsalis*
White-winged Crossbill *Loxia leucoptera*

Mammals

Pygmy Shrew *Sorex hoyi*
Red-tailed Chipmunk *Neotamias ruficaudus*
Northern Bog Lemming *Synaptomys borealis*
Grizzly or Brown Bear *Ursus arctos*
Fisher *Martes pennanti*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*

Mountain Goat *Oreamnos americanus*

Mesic Deciduous Shrubland

Birds

Merlin *Falco columbarius*

Upland Sandpiper *Bartramia longicauda*

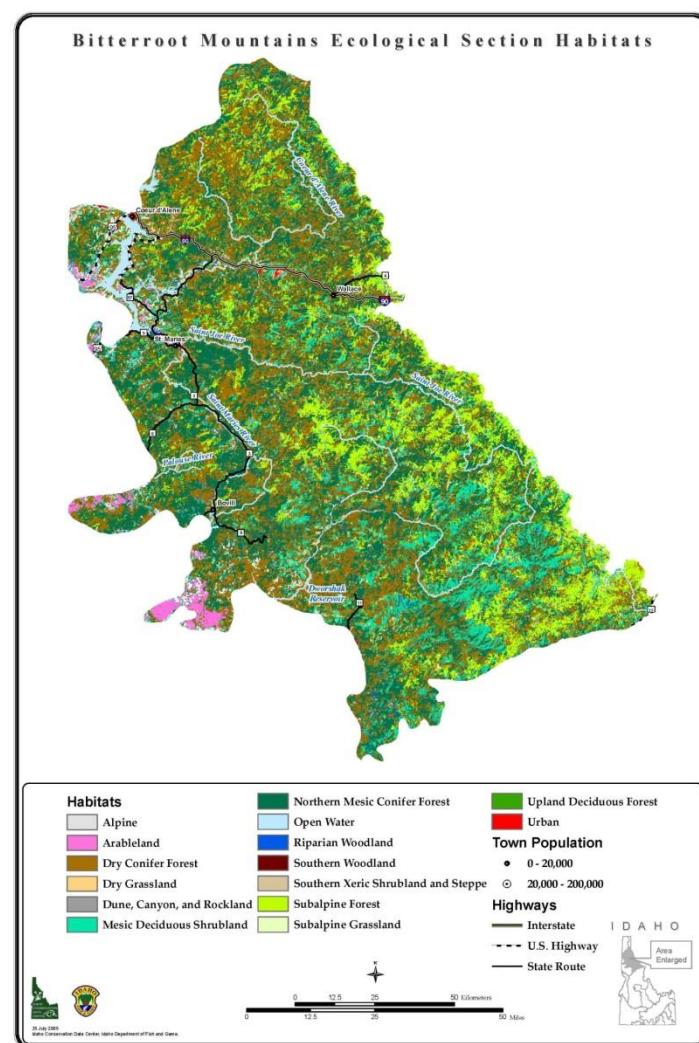
Bitterroot Mountains

Ecological Section

This area comprises steep, dissected mountains with sharp crests and narrow valleys.

Elevation ranges from 366–2135 m (1200–7000 ft). Soil is shallow to moderately deep with loamy to sandy textures and usually contains volcanic ash. Perennial streams are generally fairly steep and deeply incised. Major rivers include the Coeur d'Alene, St. Maries, St. Joe and Clearwater.

Annual precipitation averages 102–203 cm (40–80 in). Most precipitation falls as snow and summers are relatively dry. Annual average temperature ranges from 2–7°C (36–45°F). Climate is maritime-influenced, having cool and moist overall conditions, with relatively mild winters and drier summers. The growing season varies with elevation and ranges from 45 to 100 days.



Communities are generally small and many are situated along major water bodies. Coeur d'Alene is the major population center. Mining, timber harvest, and recreation are dominant land uses, and livestock grazing is locally important.

| LAND USE | AREA (ha) | AREA (ac) | PERCENT |
|---------------------|------------------|------------------|------------|
| Dryland Agriculture | 108,962 | 269,249 | 6 |
| Timberland | 1,584,989 | 3,916,578 | 84 |
| Rangeland | 148,423 | 366,759 | 8 |
| Riparian | 15,714 | 38,829 | 1 |
| Urban | 10,340 | 25,551 | 1 |
| Water | 19,512 | 48,215 | 1 |
| Total | 1,887,939 | 4,665,181 | 100 |

| LAND OWNERSHIP | AREA (ha) | AREA (ac) | PERCENT |
|--------------------------------|------------------|------------------|------------|
| USDI Bureau of Land Management | 39,526 | 97,671 | 2 |
| USDI Bureau of Indian Affairs | 5659 | 13,983 | <1 |
| USDA Forest Service | 1,103,911 | 2,727,812 | 58 |
| US Department of Defense | 5810 | 14,357 | <1 |
| USDI National Park Service | 401 | 991 | <1 |
| Open water | 21,611 | 53,401 | 1 |
| Private | 578,316 | 1,429,045 | 31 |
| State of Idaho | 132,707 | 327,926 | 7 |
| Total | 1,887,941 | 4,665,186 | 100 |

Table 5: Bitterroot Mountains land use and land ownership

Species of Greatest Conservation Need in the Bitterroot Mountains

Lampreys

Pacific Lamprey *Lampetra tridentata*

Fishes

Westslope Cutthroat Trout *Oncorhynchus clarkii lewisi*^a

Inland Redband Trout *Oncorhynchus mykiss gairdneri*

Steelhead (Snake River basin) *Oncorhynchus mykiss gairdneri*

Chinook Salmon (Snake River fall-run) *Oncorhynchus tshawytscha*

Chinook Salmon (Snake River spring/summer-run) *Oncorhynchus tshawytscha*

Pygmy Whitefish *Prosopium coulterii*
Bull Trout *Salvelinus confluentus*^a

Amphibians

Northern Leopard Frog *Rana pipiens*
Idaho Giant Salamander *Dicamptodon aterrimus*^a
Coeur d'Alene Salamander *Plethodon idahoensis*^a

Reptiles

Northern Alligator Lizard *Elgaria coerulea*
Ring-necked Snake *Diadophis punctatus*

Birds

Northern Pintail *Anas acuta*
Harlequin Duck *Histrionicus histrionicus*^a
Hooded Merganser *Lophodytes cucullatus*^a
Mountain Quail *Oreortyx pictus*
Red-necked Grebe *Podiceps grisegena*^a
Western Grebe *Aechmophorus occidentalis*
Bald Eagle *Haliaeetus leucocephalus*^a
Swainson's Hawk *Buteo swainsoni*
Merlin *Falco columbarius*
Peregrine Falcon *Falco peregrinus*
Upland Sandpiper *Bartramia longicauda*
Long-billed Curlew *Numenius americanus*
Wilson's Phalarope *Phalaropus tricolor*
California Gull *Larus californicus*
Black Tern *Chlidonias niger*
Short-eared Owl *Asio flammeus*
Boreal Owl *Aegolius funereus*
Black Swift *Cypseloides niger*^a
Lewis's Woodpecker *Melanerpes lewis*
White-headed Woodpecker *Picoides albolarvatus*^a
American Three-toed Woodpecker *Picoides dorsalis*^a
Pygmy Nuthatch *Sitta pygmaea*
White-winged Crossbill *Loxia leucoptera*^a

Mammals

Pygmy Shrew *Sorex hoyi*
California Myotis *Myotis californicus*^a

Fringed Myotis *Myotis thysanodes*^a
Townsend's Big-eared Bat *Corynorhinus townsendii*
Red-tailed Chipmunk *Neotamias ruficaudus*^a
Gray Wolf *Canis lupus*^a
Fisher *Martes pennanti*^a
Wolverine *Gulo gulo*^a
Canada Lynx *Lynx canadensis*^a
Mountain Goat *Oreamnos americanus*

Bivalves

Western Pearlshell *Margaritifera falcata*

Gastropods

Fir Pinwheel *Radiodiscus abietum*
Pygmy Slug *Kootenaia burkei*^a
Pale Jumping-slug *Hemphillia camelus*
Magnum Mantleslug *Magnipelta mycophaga*^a
Smoky Taildropper *Prophysaon humile*^a
Sheathed Slug *Zacoleus idahoensis*
Lyre Mantleslug *Udosarx lyrata*^a
Thinlip Tightcoil *Pristiloma idahoense*
An Oregonian *Cryptomastix mullani blandi*^a
An Oregonian (Lower Clearwater River) *Cryptomastix mullani tuckeri*
Kingston Oregonian *Cryptomastix sanburni*^a
Humped Coin *Polygyrella polygyrella*

Insects

A Mayfly *Caurinella idahoensis*
A Mayfly *Ameletus suffusus*^a
A Mayfly *Ameletus tolae*^a
A Mayfly *Paraleptophlebia vaciva*
A Spur-throat Grasshopper *Melanoplus digitifer*
A Stonefly *Capnia zukeli*
A Stonefly *Megaleuctra kincaidi*^a
A Stonefly *Taenionema umatilla*^a
A Spring Stonefly *Cascadoperla trictura*^a
A Stonefly *Pictetiella expansa*
Gillette's Checkerspot *Euphydryas gillettii*

^a Species for which the Bitterroot Mountains represents a significant portion of their Idaho range.

Habitats in the Bitterroot Mountains

| HABITAT | AREA (km ²) | AREA (ac) | PERCENT |
|-------------------------------|-------------------------|------------------|------------|
| Urban | 36 | 8989 | <1 |
| Arableland | 214 | 52,779 | 1 |
| Upland Deciduous Forest | 148 | 36,570 | 1 |
| Dry Conifer Forest | 6726 | 1,661,921 | 36 |
| Northern Mesic Conifer Forest | 6054 | 1,496,152 | 32 |
| Subalpine Forest | 2281 | 563,700 | 12 |
| Mesic Deciduous Shrubland | 1824 | 450,598 | 10 |
| Dry Grassland | 280 | 69,092 | 1 |
| Palouse Prairie | 258 | 63,751 | 1 |
| Subalpine Grassland | 237 | 58,499 | 1 |
| Open Water | 217 | 53,582 | 1 |
| Riparian Woodland | 418 | 103,197 | 2 |
| Dune, Canyon, and Rockland | 183 | 45,223 | 1 |
| Total | 18,876 | 4,664,053 | 100 |

Table 6: Bitterroot Mountains Habitat

Priority Habitats and Associated Vertebrate Species in the Bitterroot Mountains

Dry Conifer Forest

Lampreys

Pacific Lamprey *Lampetra tridentata*

Fishes

Westslope Cutthroat Trout *Oncorhynchus clarkii lewisi*

Chinook Salmon (Snake River fall-run) *Oncorhynchus tshawytscha*

Chinook Salmon (Snake River spring/summer-run) *Oncorhynchus tshawytscha*

Pygmy Whitefish *Prosopium coulterii*

Bull Trout *Salvelinus confluentus*

Amphibians

Northern Leopard Frog *Rana pipiens*

Idaho Giant Salamander *Dicamptodon aterrimus*
Coeur d'Alene Salamander *Plethodon idahoensis*

Reptiles

Ring-necked Snake *Diadophis punctatus*

Birds

Harlequin Duck *Histrionicus histrionicus*
Mountain Quail *Oreortyx pictus*
Bald Eagle *Haliaeetus leucocephalus*
Merlin *Falco columbarius*
Peregrine Falcon *Falco peregrinus*
Boreal Owl *Aegolius funereus*
Black Swift *Cypseloides niger*
White-headed Woodpecker *Picoides albolarvatus*
American Three-toed Woodpecker *Picoides dorsalis*
Pygmy Nuthatch *Sitta pygmaea*
White-winged Crossbill *Loxia leucoptera*

Mammals

Pygmy Shrew *Sorex hoyi*
Fringed Myotis *Myotis thysanodes*
Townsend's Big-eared Bat *Corynorhinus townsendii*
Red-tailed Chipmunk *Neotamias ruficaudus*
Gray Wolf *Canis lupus*
Fisher *Martes pennanti*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*
Mountain Goat *Oreamnos americanus*

Northern Mesic Conifer Forest

Lampreys

Pacific Lamprey *Lampetra tridentata*

Fishes

Westslope Cutthroat Trout *Oncorhynchus clarkii lewisi*
Chinook Salmon (Snake River fall-run) *Oncorhynchus tshawytscha*
Chinook Salmon (Snake River spring/summer-run) *Oncorhynchus tshawytscha*
Pygmy Whitefish *Prosopium coulterii*

Bull Trout *Salvelinus confluentus*

Amphibians

Northern Leopard Frog *Rana pipiens*
Idaho Giant Salamander *Dicamptodon aterrimus*
Coeur d'Alene Salamander *Plethodon idahoensis*

Birds

Harlequin Duck *Histrionicus histrionicus*
Bald Eagle *Haliaeetus leucocephalus*
Peregrine Falcon *Falco peregrinus*
Boreal Owl *Aegolius funereus*
Black Swift *Cypseloides niger*
Pygmy Nuthatch *Sitta pygmaea*
White-winged Crossbill *Loxia leucoptera*

Mammals

Pygmy Shrew *Sorex hoyi*
Townsend's Big-eared Bat *Corynorhinus townsendii*
Red-tailed Chipmunk *Neotamias ruficaudus*
Gray Wolf *Canis lupus*
Fisher *Martes pennanti*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*

Subalpine Forest

Fishes

Pygmy Whitefish *Prosopium coulterii*

Amphibians

Northern Leopard Frog *Rana pipiens*
Idaho Giant Salamander *Dicamptodon aterrimus*

Birds

Harlequin Duck *Histrionicus histrionicus*
Bald Eagle *Haliaeetus leucocephalus*
Peregrine Falcon *Falco peregrinus*
Boreal Owl *Aegolius funereus*

Black Swift *Cypseloides niger*
White-headed Woodpecker *Picoides albolarvatus*
American Three-toed Woodpecker *Picoides dorsalis*

Mammals

Pygmy Shrew *Sorex hoyi*
Fisher *Martes pennanti*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*
Mountain Goat *Oreamnos americanus*

Mesic Deciduous Shrubland

Lampreys

Pacific Lamprey *Lampetra tridentata*

Fishes

Westslope Cutthroat Trout *Oncorhynchus clarkii lewisi*
Chinook Salmon (Snake River spring/summer-run) *Oncorhynchus tshawytscha*
Bull Trout *Salvelinus confluentus*

Amphibians

Coeur d'Alene Salamander *Plethodon idahoensis*

Birds

Mountain Quail *Oreortyx pictus*
Merlin *Falco columbarius*

Mammals

Townsend's Big-eared Bat *Corynorhinus townsendi*
Gray Wolf *Canis lupus*

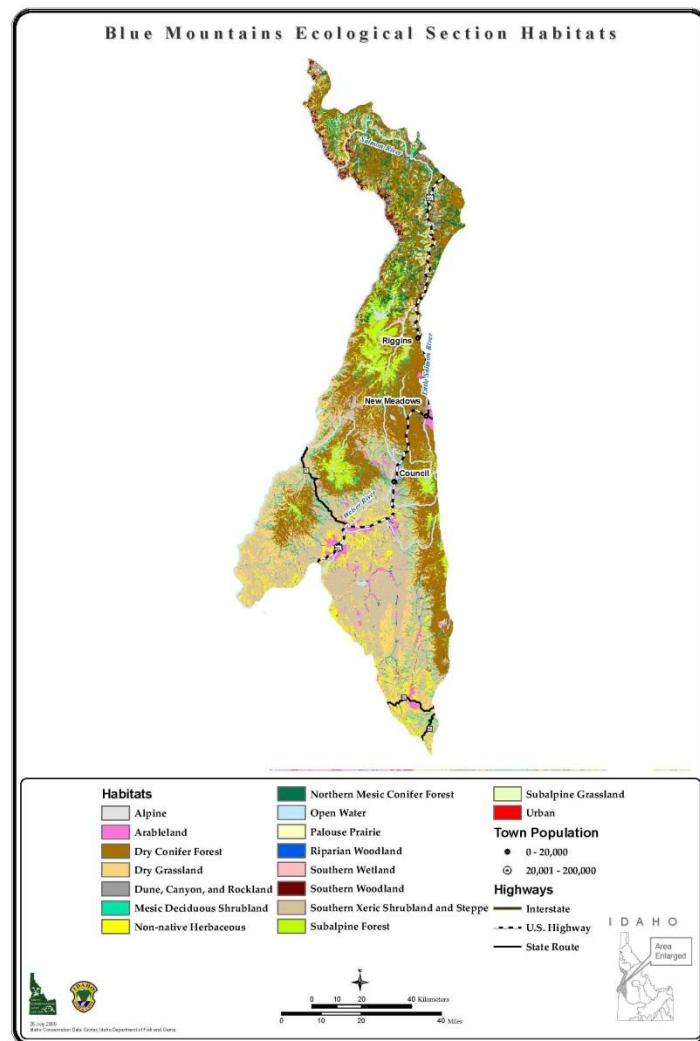
Middle Rockies-Blue Mountain Ecoregion

Blue Mountains Ecological Section

Hells Canyon of the Snake River is a major feature on this landscape. A wide, uplifted plateau occurs in the western portion and mountains characterize the eastern portion. In addition to the Snake River, water bodies include the lower reaches of the Salmon River, portions of the Payette and Weiser Rivers, numerous streams, as well as several reservoirs, springs, and alpine lakes. Elevation ranges from 225 to 3100 m (750–9400 ft). Most of the mountains are 1200–2300 m (4000–7500 ft) in elevation. Soil often contains volcanic ash. An ash mantle is relatively undisturbed on gentle north slopes under forest canopies but on southerly exposures the ash has been mostly removed by erosion.

Annual average precipitation is 23–46 cm (9–18 in) in the valleys and 43 to 254 cm (17 to 100 in) in the mountains. Annual average temperature ranges from –2–11°C (28–52°F). The growing season varies considerably with elevation and lasts for 30–130 days.

Human settlements are small and scattered, occurring primarily in valleys along rivers. Mining, timber harvest, agriculture, livestock grazing, and recreation are primary land uses.



| LAND USE | AREA (ha) | AREA (ac) | PERCENT |
|------------------------|-----------|-----------|---------|
| Dryland Agriculture | 7277 | 17,983 | 1 |
| Irrigated-Gravity Flow | 25,961 | 64,151 | 2 |

| LAND USE | AREA (ha) | AREA (ac) | PERCENT |
|---------------------|------------------|------------------|------------|
| Irrigated–Sprinkler | 7466 | 18,448 | 1 |
| Rangeland | 575,112 | 1,421,127 | 53 |
| Riparian | 459 | 1134 | <1 |
| Timberland | 432,504 | 1,068,735 | 40 |
| Urban | 427 | 1054 | <1 |
| Water | 1883 | 4653 | <1 |
| Wilderness | 35,550 | 87,846 | 3 |
| Total | 1,086,639 | 2,685,133 | 100 |

| LAND OWNERSHIP | AREA (ha) | AREA (ac) | PERCENT |
|--------------------------------|------------------|------------------|------------|
| USDI Bureau of Land Management | 158,024 | 390,484 | 15 |
| USDI Bureau of Reclamation | 674 | 1665 | <1 |
| USDA Forest Service | 350,761 | 866,747 | 32 |
| US Department of Defense | 37 | 91 | 0 |
| USDI National Park Service | 775 | 1915 | <1 |
| Open water | 5664 | 13,997 | 1 |
| Private | 499,496 | 1,234,277 | 46 |
| State of Idaho | 70,952 | 175,326 | 7 |
| Total | 1,086,383 | 2,684,501 | 100 |

Table 7: Blue Mountains Land Use and Land Ownership

Species of Greatest Conservation Need in the Blue Mountains

Lampreys

Pacific Lamprey *Lampetra tridentata*^a

Fishes

White Sturgeon (Snake River system) *Acipenser transmontanus*^a

Leopard Dace *Rhinichthys falcatus*

Umatilla Dace *Rhinichthys umatilla*

Westslope Cutthroat Trout *Oncorhynchus clarkii lewisi*

Inland Redband Trout *Oncorhynchus mykiss gairdneri*^a

Steelhead (Snake River basin) *Oncorhynchus mykiss gairdneri*^a
Sockeye Salmon (Snake River) *Oncorhynchus nerka*^a
Chinook Salmon (Snake River fall-run) *Oncorhynchus tshawytscha*^a
Chinook Salmon (Snake River spring/summer-run) *Oncorhynchus tshawytscha*^a
Bull Trout *Salvelinus confluentus*^a
Sand Roller *Percopsis transmontana*^a

Amphibians

Woodhouse's Toad *Bufo woodhousii*
Northern Leopard Frog *Rana pipiens*
Idaho Giant Salamander *Dicamptodon aterrimus*

Reptiles

Ring-necked Snake *Diadophis punctatus*

Birds

Northern Pintail *Anas acuta*
Lesser Scaup *Aythya affinis*
Hooded Merganser *Lophodytes cucullatus*
Greater Sage-Grouse *Centrocercus urophasianus*
Sharp-tailed Grouse *Tympanuchus phasianellus*^a
Mountain Quail *Oreortyx pictus*^a
Western Grebe *Aechmophorus occidentalis*
Clark's Grebe *Aechmophorus clarkii*
Black-crowned Night-Heron *Nycticorax nycticorax*
Bald Eagle *Haliaeetus leucocephalus*
Swainson's Hawk *Buteo swainsoni*
Ferruginous Hawk *Buteo regalis*
Merlin *Falco columbarius*
Peregrine Falcon *Falco peregrinus*
Sandhill Crane *Grus canadensis*
American Avocet *Recurvirostra americana*
Upland Sandpiper *Bartramia longicauda*^a
Long-billed Curlew *Numenius americanus*
California Gull *Larus californicus*
Caspian Tern *Sterna caspia*
Flammulated Owl *Otus flammeolus*
Burrowing Owl *Athene cunicularia*
Short-eared Owl *Asio flammeus*
Boreal Owl *Aegolius funereus*

Lewis's Woodpecker *Melanerpes lewis*
White-headed Woodpecker *Picoides albolarvatus*^a
American Three-toed Woodpecker *Picoides dorsalis*
Pygmy Nuthatch *Sitta pygmaea*^a
Grasshopper Sparrow *Ammodramus savannarum*
Black Rosy-Finch *Leucosticte atrata*
Lesser Goldfinch *Carduelis psaltria*

Mammals

Merriam's Shrew *Sorex merriami*
Dwarf Shrew *Sorex nanus*
Coast Mole *Scapanus orarius*^a
California Myotis *Myotis californicus*^a
Fringed Myotis *Myotis thysanodes*
Townsend's Big-eared Bat *Corynorhinus townsendii*
Pygmy Rabbit *Brachylagus idahoensis*
Northern Idaho Ground Squirrel *Spermophilus brunneus brunneus*^a
Southern Idaho Ground Squirrel *Spermophilus brunneus endemicus*^a
Great Basin Ground Squirrel *Spermophilus mollis*
Gray Wolf *Canis lupus*
Fisher *Martes pennanti*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*
Mountain Goat *Oreamnos americanus*

Bivalves

Western Ridged Mussel *Gonidea angulata*^a
Western Pearlshell *Margaritifera falcata*

Gastropods

Pixie Pebblesnail *Fluminicola minutissimus*^a
Pristine Pyrg *Pristinicola hemphilli*^a
Shortspire Pondsail *Stagnicola idahoensis*^a
Mountain Marshsnail *Stagnicola montanensis*
Shortface Lanx *Fisherola nuttalli*^a
Western Flat-whorl *Planogyra clappi*^a
Fir Pinwheel *Radiodiscus abietum*
Salmon Coil *Helicodiscus salmonaceus*^a
Marbled Disc *Discus marmorensis*^a
Pale Jumping-slug *Hemphillia camelus*

Sheathed Slug *Zacoleus idahoensis*
 Thinlip Tightcoil *Pristiloma idahoense*
 Shiny Tightcoil *Pristiloma wascoense*
 Selway Forestsnail *Allogona lombardii*
 Dry Land Forestsnail *Allogona ptychophora solida*^a
 River of No Return Oregonian *Cryptomastix mullani clappi*^a
 An Oregonian (Lower Salmon River) *Cryptomastix mullani latilabris*
 Salmon Oregonian *Cryptomastix harfordiana*^a
 An Oregonian (Hells Canyon) *Cryptomastix populi*^a
 Humped Coin *Polygyrella polygyrella*
 Lyrate Mountainsnail *Oreohelix haydeni*^a
 Costate Mountainsnail *Oreohelix idahoensis*^a
 Deep Slide Mountainsnail *Oreohelix intersum*^a
 Boulder Pile Mountainsnail *Oreohelix jugalis*^a
 Striate Mountainsnail *Oreohelix strigosa goniogryra*^a
 Whorled Mountainsnail *Oreohelix vortex*^a
 Lava Rock Mountainsnail *Oreohelix waltoni*^a
 Seven Devils Mountainsnail *Oreohelix hammeri*^a

Insects

A Mayfly *Ametropus ammophilus*
 A Spur-throat Grasshopper *Melanoplus daemon*^a
 A Spur-throat Grasshopper *Melanoplus digitifer*
 A Spur-throat Grasshopper *Melanoplus payettei*^a
 A Stonefly *Utacapnia nedia*
 A Spring Stonefly *Malenka tina*
 Columbia River Tiger Beetle *Cicindela columbica*^a

^a Species for which the Blue Mountains represents a significant portion of their Idaho range.

Habitats in the Blue Mountains

| HABITAT | AREA (km ²) | AREA (ac) | PERCENT |
|-------------------------------|-------------------------|-----------|---------|
| Arableland | 383 | 94,724 | 4 |
| Non-native Herbaceous | 618 | 152,740 | 6 |
| Southern Woodland | 122 | 30,196 | 1 |
| Dry Conifer Forest | 3472 | 858,204 | 32 |
| Northern Mesic Conifer Forest | 387 | 95,648 | 4 |

| HABITAT | AREA (km ²) | AREA (ac) | PERCENT |
|-------------------------------------|-------------------------|------------------|------------|
| Subalpine Forest | 559 | 138,013 | 5 |
| Mesic Deciduous Shrubland | 438 | 108,185 | 4 |
| Southern Xeric Shrubland and Steppe | 2730 | 674,400 | 25 |
| Dry Grassland | 1273 | 314,520 | 12 |
| Palouse Prairie | 6 | 1552 | <1 |
| Subalpine Grassland | 226 | 55,675 | 2 |
| Alpine | 34 | 8270 | <1 |
| Open Water | 86 | 21,210 | 1 |
| Riparian Woodland | 222 | 55,138 | 2 |
| Dune, Canyon, and Rockland | 209 | 51,638 | 2 |
| Total | 10,765 | 2,660,113 | 100 |

Table 8: Blue Mountain Habitats

Priority Habitats and Associated Vertebrate Species in the Blue Mountains

Non-native Herbaceous

Amphibians

Northern Leopard Frog *Rana pipiens*

Birds

Sharp-tailed Grouse *Tympanuchus phasianellus*

Upland Sandpiper *Bartramia longicauda*

Long-billed Curlew *Numenius americanus*

Burrowing Owl *Athene cunicularia*

Mammals

Merriam's Shrew *Sorex merriami*

California Myotis *Myotis californicus*

Dry Conifer Forest

Lampreys

Pacific Lamprey *Lampetra tridentata*

Fishes

White Sturgeon (Snake River system) *Acipenser transmontanus*
Westslope Cutthroat Trout *Oncorhynchus clarkii lewisi*
Inland Redband Trout *Oncorhynchus mykiss gairdneri*
Steelhead (Snake River basin) *Oncorhynchus mykiss gairdneri*
Sockeye Salmon (Snake River) *Oncorhynchus nerka*
Chinook Salmon (Snake River fall-run) *Oncorhynchus tshawytscha*
Chinook Salmon (Snake River spring/summer-run) *Oncorhynchus tshawytscha*
Bull Trout *Salvelinus confluentus*

Amphibians

Idaho Giant Salamander *Dicamptodon aterrimus*

Reptiles

Ring-necked Snake *Diadophis punctatus*

Birds

Mountain Quail *Oreortyx pictus*
Bald Eagle *Haliaeetus leucocephalus*
Merlin *Falco columbarius*
Peregrine Falcon *Falco peregrinus*
Boreal Owl *Aegolius funereus*
White-headed Woodpecker *Picoides albolarvatus*
American Three-toed Woodpecker *Picoides dorsalis*
Pygmy Nuthatch *Sitta pygmaea*
Lesser Goldfinch *Carduelis psaltria*

Mammals

Coast Mole *Scapanus orarius*
Fringed Myotis *Myotis thysanodes*
Townsend's Big-eared Bat *Corynorhinus townsendii*
Northern Idaho Ground Squirrel *Spermophilus brunneus brunneus*
Southern Idaho Ground Squirrel *Spermophilus brunneus endemicus*
Gray Wolf *Canis lupus*
Fisher *Martes pennanti*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*
Mountain Goat *Oreamnos americanus*

Southern Xeric Shrubland and Steppe

Fishes

Inland Redband Trout *Oncorhynchus mykiss gairdneri*

Amphibians

Northern Leopard Frog *Rana pipiens*

Birds

Greater Sage-Grouse *Centrocercus urophasianus*

Sharp-tailed Grouse *Tympanuchus phasianellus*

Merlin *Falco columbarius*

Peregrine Falcon *Falco peregrinus*

Long-billed Curlew *Numenius americanus*

Burrowing Owl *Athene cunicularia*

Grasshopper Sparrow *Ammodramus savannarum*

Mammals

Merriam's Shrew *Sorex merriami*

California Myotis *Myotis californicus*

Townsend's Big-eared Bat *Corynorhinus townsendii*

Pygmy Rabbit *Brachylagus idahoensis* [trivially]

Great Basin Ground Squirrel *Spermophilus mollis*

Dry Grassland

Fishes

White Sturgeon (Snake River system) *Acipenser transmontanus*

Inland Redband Trout *Oncorhynchus mykiss gairdneri*

Chinook Salmon (Snake River fall-run) *Oncorhynchus tshawytscha*

Bull Trout *Salvelinus confluentus*

Amphibians

Northern Leopard Frog *Rana pipiens*

Reptiles

Ring-necked Snake *Diadophis punctatus*

Birds

Northern Pintail *Anas acuta*

Mountain Quail *Oreortyx pictus*
 Merlin *Falco columbarius*
 Upland Sandpiper *Bartramia longicauda*
 Long-billed Curlew *Numenius americanus*
 Burrowing Owl *Athene cunicularia*
 Grasshopper Sparrow *Ammodramus savannarum*

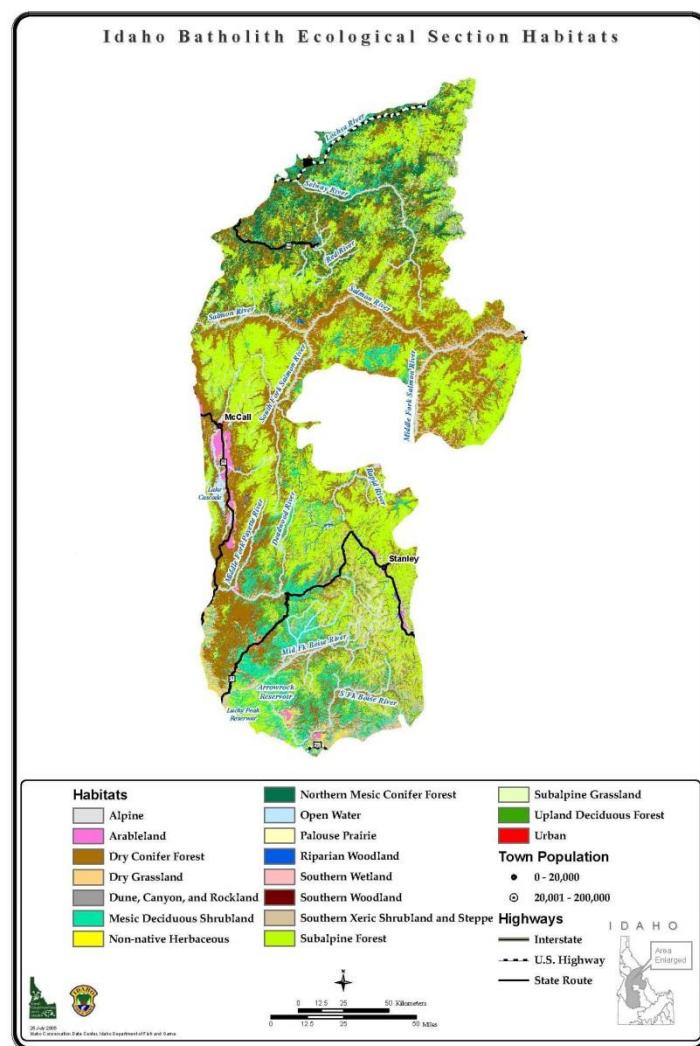
Mammals

Merriam's Shrew *Sorex merriami*
 California Myotis *Myotis californicus*
 Fringed Myotis *Myotis thysanodes*
 Gray Wolf *Canis lupus*

Idaho Batholith Ecological Section

This area is characterized by extensive mountainous terrain; alpine ridges, cirques, and large U-shaped valleys with broad bottoms and other features of glacial origins dominate many areas such as the Sawtooth Mountains. Water bodies are predominant including major portions of the Salmon, Clearwater, Payette, and Boise rivers. Many perennial streams and lakes are present, as well as a number of reservoirs. Elevation ranges from 425 to 3400 m (1400 to 11,000 ft). Soils are generally shallow to moderately deep loam and sand. Volcanic ash accumulations in some soils have caused them to be especially productive.

Annual precipitation ranges from 51–203 cm (20–80 in) much of which falls as snow during the fall, winter, and spring. Climate is maritime-influenced with cool



temperate weather and dry summers. Average annual temperature ranges from 2–7°C (35–46°F) but may be as low as –4°C (24°F) in the high mountains. The growing season lasts 45–100 days.

The northern portion of the section is primarily wilderness, with few small communities. Communities in southern areas are typically small and concentrated along rivers. Larger towns, such as Stanley and McCall are the focus of tourism and recreation. Timber harvest and recreation are dominant land uses, with livestock grazing and mining of local importance.

| LAND USE | AREA (ha) | AREA (ac) | PERCENT |
|------------------------|------------------|-------------------|------------|
| Dryland Agriculture | 3045 | 7525 | <1 |
| Irrigated–Gravity Flow | 48,237 | 119,195 | 1 |
| Irrigated–Sprinkler | 7253 | 17,921 | <1 |
| Rangeland | 342,721 | 846,879 | 8 |
| Riparian | 14,258 | 35,232 | <1 |
| Timberland | 2,400,513 | 5,931,774 | 59 |
| Urban | 469 | 1158 | <1 |
| Water | 13,162 | 32,524 | <1 |
| Wilderness | 1,226,135 | 3,029,833 | 30 |
| Total | 4,055,792 | 10,022,041 | 100 |

| LAND OWNERSHIP | AREA (ha) | AREA (ac) | PERCENT |
|--------------------------------|------------------|-------------------|------------|
| USDI Bureau of Land Management | 52,123 | 128,797 | 1 |
| USDI Bureau of Reclamation | 16,720 | 41,316 | <1 |
| USDA Forest Service | 3,564,471 | 8,807,965 | 88 |
| US Department of Defense | 263 | 650 | <1 |
| Open water | 24,682 | 60,989 | 1 |
| Private | 302,986 | 748,693 | 7 |
| State of Idaho | 94,548 | 233,632 | 2 |
| Total | 4,055,793 | 10,022,043 | 100 |

Table 9: Idaho Batholith Land Use and Land Ownership.

Species of Greatest Conservation Need in the Idaho Batholith

Lampreys

Pacific Lamprey *Lampetra tridentata*^a

Fishes

White Sturgeon (Snake River system) *Acipenser transmontanus*

Leopard Dace *Rhinichthys falcatus*

Umatilla Dace *Rhinichthys umatilla*

Westslope Cutthroat Trout *Oncorhynchus clarkii lewisi*^a

Inland Redband Trout *Oncorhynchus mykiss gairdneri*^a

Steelhead (Snake River basin) *Oncorhynchus mykiss gairdneri*^a

Sockeye Salmon (Snake River) *Oncorhynchus nerka*^a

Kokanee *Oncorhynchus nerka*^a

Chinook Salmon (Snake River fall-run) *Oncorhynchus tshawytscha*

Chinook Salmon (Snake River spring/summer-run) *Oncorhynchus tshawytscha*^a

Bull Trout *Salvelinus confluentus*^a

Wood River Sculpin *Cottus leiopomus*

Amphibians

Woodhouse's Toad *Bufo woodhousii*

Northern Leopard Frog *Rana pipiens*

Idaho Giant Salamander *Dicamptodon aterrimus*^a

Coeur d'Alene Salamander *Plethodon idahoensis*^a

Reptiles

Ring-necked Snake *Diadophis punctatus*

Long-nosed Snake *Rhinocheilus lecontei*

Birds

Northern Pintail *Anas acuta*

Lesser Scaup *Aythya affinis*

Harlequin Duck *Histrionicus histrionicus*^a

Greater Sage-Grouse *Centrocercus urophasianus*

Sharp-tailed Grouse *Tympanuchus phasianellus*

Mountain Quail *Oreortyx pictus*^a

Red-necked Grebe *Podiceps grisegena*

Western Grebe *Aechmophorus occidentalis*^a

Clark's Grebe *Aechmophorus clarkii*^a

American White Pelican *Pelecanus erythrorhynchos*

Great Egret *Ardea alba*
Black-crowned Night-Heron *Nycticorax nycticorax*
Bald Eagle *Haliaeetus leucocephalus*^a
Swainson's Hawk *Buteo swainsoni*
Ferruginous Hawk *Buteo regalis*
Merlin *Falco columbarius*
Peregrine Falcon *Falco peregrinus*^a
Sandhill Crane *Grus canadensis*
American Avocet *Recurvirostra americana*
Upland Sandpiper *Bartramia longicauda*^a
Long-billed Curlew *Numenius americanus*
Franklin's Gull *Larus pipixcan*
California Gull *Larus californicus*
Caspian Tern *Sterna caspia*
Flammulated Owl *Otus flammeolus*
Burrowing Owl *Athene cunicularia*
Short-eared Owl *Asio flammeus*
Boreal Owl *Aegolius funereus*^a
Lewis's Woodpecker *Melanerpes lewis*
White-headed Woodpecker *Picoides albolarvatus*^a
American Three-toed Woodpecker *Picoides dorsalis*^a
Pygmy Nuthatch *Sitta pygmaea*^a
Brewer's Sparrow *Spizella breweri*
Grasshopper Sparrow *Ammodramus savannarum*
Black Rosy-Finch *Leucosticte atrata*^a
Lesser Goldfinch *Carduelis psaltria*^a

Mammals

Pygmy Shrew *Sorex hoyi*
Merriam's Shrew *Sorex merriami*
Dwarf Shrew *Sorex nanus*^a
Coast Mole *Scapanus orarius*
Fringed Myotis *Myotis thysanodes*^a
Spotted Bat *Euderma maculatum*
Townsend's Big-eared Bat *Corynorhinus townsendii*
Pygmy Rabbit *Brachylagus idahoensis*
Red-tailed Chipmunk *Neotamias ruficaudus*^a
Northern Idaho Ground Squirrel *Spermophilus brunneus brunneus*^a
Townsend's Pocket Gopher *Thomomys townsendii*
Gray Wolf *Canis lupus*^a

Kit Fox *Vulpes macrotis*
Fisher *Martes pennanti*^a
Wolverine *Gulo gulo*^a
Canada Lynx *Lynx Canadensis*^a
Mountain Goat *Oreamnos americanus*^a

Bivalves

Western Pearlshell *Margaritifera falcata*

Gastropods

Pristine Pyrg *Pristinicola hemphilli*
Shortface Lanx *Fisherola nuttalli*
Idaho Vertigo *Vertigo idahoensis*^a
Fir Pinwheel *Radiodiscus abietum*
Salmon Coil *Helicodiscus salmonaceus*
Nimapuna Tigersnail *Anguispira nimapuna*^a
Marbled Disc *Discus marmorensis*
Pale Jumping-slug *Hemphillia camelus*
Sheathed Slug *Zacoleus idahoensis*
Thinlip Tightcoil *Pristiloma idahoense*
Shiny Tightcoil *Pristiloma wascoense*
Selway Forestsnail *Allogona lombardii*^a
River of No Return Oregonian *Cryptomastix mullani clappi*^a
An Oregonian (Lower Salmon River) *Cryptomastix mullani latilabris*
Humped Coin *Polygyrella polygyrella*^a
Boulder Pile Mountainsnail *Oreohelix jugalis*
Striate Mountainsnail *Oreohelix strigosa goniogryra*

Crustaceans

Idaho Amphipod *Stygobromus idahoensis*^a

Insects

A Mayfly *Caurinella idahoensis*^a
A Mayfly *Ameletus sparsatus*^a
A Mayfly *Ametropus ammophilus*^a
A Mayfly *Paraleptophlebia vaciva*^a
A Mayfly *Paramelletus columbiae*
A Spur-throat Grasshopper *Melanoplus digitifer*
A Spur-throat Grasshopper *Melanoplus papyraedus*^a
A Spur-throat Grasshopper *Melanoplus payettei*

A Grasshopper *Argiacris keithi*^a
A Grasshopper *Argiacris militaris*^a
A Grasshopper *Barracris petraea*
A Stonefly *Soyedina potteri*^a
A Stonefly *Zapada cordillera*^a
Gillette's Checkerspot *Euphydryas gillettii*

^a Species for which the Idaho Batholith represents a significant portion of their range.

Habitats in the Idaho Batholith

| HABITAT | AREA (km ²) | AREA (ac) | PERCENT |
|-------------------------------------|-------------------------|------------------|------------|
| Urban | 27 | 6710 | <1 |
| Arableland | 389 | 96,133 | 1 |
| Non-native Herbaceous | 214 | 52,790 | 1 |
| Upland Deciduous Forest | 307 | 75,936 | 1 |
| Southern Woodland | 22 | 5432 | <1 |
| Dry Conifer Forest | 12,831 | 3,170,525 | 32 |
| Northern Mesic Conifer Forest | 2430 | 600,516 | 6 |
| Subalpine Forest | 13,796 | 3,409,015 | 34 |
| Mesic Deciduous Shrubland | 3893 | 961,894 | 10 |
| Southern Xeric Shrubland and Steppe | 3052 | 754,066 | 8 |
| Dry Grassland | 774 | 191,309 | 2 |
| Subalpine Grassland | 963 | 238,143 | 2 |
| Alpine | 287 | 70,905 | 1 |
| Open Water | 233 | 57,598 | 1 |
| Riparian Woodland | 804 | 198,901 | 2 |
| Dune, Canyon, and Rockland | 419 | 103,524 | 1 |
| Total | 40,441 | 9,993,397 | 100 |

Table 10: Idaho Batholith Habitats

Priority Habitats and Associated Vertebrate Species in the Idaho Batholith

Dry Conifer Forest

Lampreys

Pacific Lamprey *Lampetra tridentata*

Fishes

White Sturgeon (Snake River system) *Acipenser transmontanus*

Leopard Dace *Rhinichthys falcatus*

Umatilla Dace *Rhinichthys umatilla*

Westslope Cutthroat Trout *Oncorhynchus clarkii lewisi*

Inland Redband Trout *Oncorhynchus mykiss gairdneri*

Steelhead (Snake River basin) *Oncorhynchus mykiss gairdneri*

Sockeye Salmon (Snake River) *Oncorhynchus nerka*

Kokanee *Oncorhynchus nerka*

Chinook Salmon (Snake River spring/summer-run) *Oncorhynchus tshawytscha*

Bull Trout *Salvelinus confluentus*

Amphibians

Northern Leopard Frog *Rana pipiens*

Idaho Giant Salamander *Dicamptodon aterrimus*

Coeur d'Alene Salamander *Plethodon idahoensis*

Reptiles

Ring-necked Snake *Diadophis punctatus*

Birds

Harlequin Duck *Histrionicus histrionicus*

Mountain Quail *Oreortyx pictus*

Bald Eagle *Haliaeetus leucocephalus*

Merlin *Falco columbarius*

Peregrine Falcon *Falco peregrinus*

Boreal Owl *Aegolius funereus*

White-headed Woodpecker *Picoides albolarvatus*

American Three-toed Woodpecker *Picoides dorsalis*

Pygmy Nuthatch *Sitta pygmaea*

Lesser Goldfinch *Carduelis psaltria*

Mammals

Pygmy Shrew *Sorex hoyi*

Fringed Myotis *Myotis thysanodes*
Spotted Bat *Euderma maculatum*
Townsend's Big-eared Bat *Corynorhinus townsendii*
Red-tailed Chipmunk *Neotamias ruficaudus*
Northern Idaho Ground Squirrel *Spermophilus brunneus brunneus*
Gray Wolf *Canis lupus*
Fisher *Martes pennanti*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*
Mountain Goat *Oreamnos americanus*

Northern Mesic Conifer Forest

Amphibians

Northern Leopard Frog *Rana pipiens*
Idaho Giant Salamander *Dicamptodon aterrimus*
Coeur d'Alene Salamander *Plethodon idahoensis*

Birds

Harlequin Duck *Histrionicus histrionicus*
Lesser Goldfinch *Carduelis psaltria*

Mammals

Red-tailed Chipmunk *Neotamias ruficaudus*

Subalpine Forest

Lampreys

Pacific Lamprey *Lampetra tridentata*

Fishes

White Sturgeon (Snake River system) *Acipenser transmontanus*
Westslope Cutthroat Trout *Oncorhynchus clarkii lewisi*
Steelhead (Snake River basin) *Oncorhynchus mykiss gairdneri*
Sockeye Salmon (Snake River) *Oncorhynchus nerka*
Chinook Salmon (Snake River spring/summer-run) *Oncorhynchus tshawytscha*
Bull Trout *Salvelinus confluentus*

Amphibians

Northern Leopard Frog *Rana pipiens*
Idaho Giant Salamander *Dicamptodon aterrimus*

Birds

Harlequin Duck *Histrionicus histrionicus*

Bald Eagle *Haliaeetus leucocephalus*
Peregrine Falcon *Falco peregrinus*
Boreal Owl *Aegolius funereus*
Black Swift *Cypseloides niger*
White-headed Woodpecker *Picoides albolarvatus*
American Three-toed Woodpecker *Picoides dorsalis*
Pygmy Nuthatch *Sitta pygmaea*

Mammals

Pygmy Shrew *Sorex hoyi*
Dwarf Shrew *Sorex nanus*
Townsend's Big-eared Bat *Corynorhinus townsendii*
Red-tailed Chipmunk *Neotamias ruficaudus*
Gray Wolf *Canis lupus*
Fisher *Martes pennanti*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*
Mountain Goat *Oreamnos americanus*

Mesic Deciduous Shrubland

Fishes

Leopard Dace *Rhinichthys falcatus*
Umatilla Dace *Rhinichthys umatilla*
Wood River Sculpin *Cottus leiopomus*

Amphibians

Northern Leopard Frog *Rana pipiens*
Coeur d'Alene Salamander *Plethodon idahoensis*

Birds

Sharp-tailed Grouse *Tympanuchus phasianellus*
Mountain Quail *Oreortyx pictus*
Ferruginous Hawk *Buteo regalis*
Merlin *Falco columbarius*

Mammals

Townsend's Big-eared Bat *Corynorhinus townsendii*
Pygmy Rabbit *Brachylagus idahoensis*
Red-tailed Chipmunk *Neotamias ruficaudus*

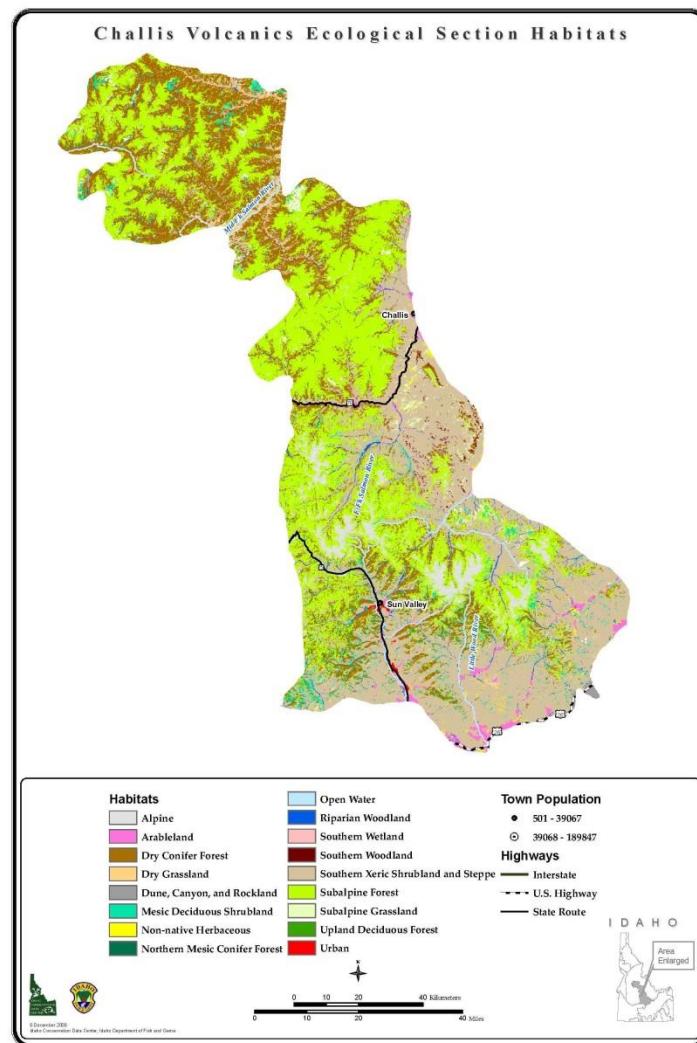
Challis Volcanics Ecological Section

This section is dominated by mountain ranges, including the White Cloud Peaks, Pioneer Mountains, Smoky Mountains, Boulder Mountains, White Knob Mountains and portions of the Salmon River Range. There are some glaciated areas. Major water bodies include the Wood River, Big Lost River, Salmon River, many perennial streams and alpine lakes exist. Elevation ranges from 1200–3600 m (4000–11,800 ft).

Climate is influenced by prevailing winds from the west and the general north–south orientation of the mountain ranges. Precipitation ranges from 25–120 cm (10 to 45 in) annually with an average of 56 cm (22 in). The majority of the precipitation occurs during the fall, winter and spring. A rain shadow effect from the high mountain barriers to the west reduces

precipitation in this section. Summers are dry with low humidity. Much of the precipitation that falls at lower elevations during summer months evaporates. The average annual air temperature is 3–10°C (34 to 50°F) but may be as low as –4°C (24°F) in the high mountains. The growing season ranges from 70 to 120 days.

Approximately half of the land is forested and major land uses are timber harvest, livestock grazing, and recreation. Mining for gold and silver is also an important use. The Wood River Valley, including Ketchum, Hailey, and Bellevue, is the population center. Development in this scenic valley has been rapid and extensive during recent decades.



| LAND USE | AREA (ha) | AREA (ac) | PERCENT |
|------------------------|------------------|------------------|------------|
| Dryland Agriculture | 175 | 71 | 0 |
| Irrigated–Gravity Flow | 60,488 | 24,479 | 2 |
| Irrigated–Sprinkler | 20,327 | 8226 | 1 |
| Rangeland | 1,588,153 | 642,705 | 45 |
| Riparian | 28,665 | 11,600 | 1 |
| Rock | 12,712 | 5144 | <1 |
| Timberland | 979,230 | 396,282 | 28 |
| Urban | 1882 | 762 | <1 |
| Wilderness | 853,220 | 345,287 | 24 |
| Total | 3,544,851 | 1,434,556 | 100 |

| LAND OWNERSHIP | AREA (ha) | AREA (ac) | PERCENT |
|--------------------------------|------------------|------------------|------------|
| USDI Bureau of Land Management | 634,857 | 256,918 | 18 |
| USDI Bureau of Reclamation | 38 | 15 | 0 |
| USDA Forest Service | 2,532,816 | 1,024,998 | 71 |
| USDI National Park Service | 7594 | 3073 | <1 |
| Open water | 2943 | 1191 | <1 |
| Private | 289,718 | 117,245 | 8 |
| State of Idaho | 76,884 | 31,114 | 2 |
| Total | 3,544,851 | 1,434,556 | 100 |

Table 11: Challis Volcanics Land Use and Land Ownership

Species of Greatest Conservation Need in the Challis Volcanics

Lampreys

Pacific Lamprey *Lampetra tridentata*^a

Fishes

Westslope Cutthroat Trout *Oncorhynchus clarkii lewisi*^a

Inland Redband Trout *Oncorhynchus mykiss gairdneri*

Steelhead (Snake River basin) *Oncorhynchus mykiss gairdneri*^a

Sockeye Salmon (Snake River) *Oncorhynchus nerka*^a

Kokanee *Oncorhynchus nerka*
Chinook Salmon (Snake River spring/summer-run) *Oncorhynchus tshawytscha*^a
Bull Trout *Salvelinus confluentus*^a
Wood River Sculpin *Cottus leiopomus*^a

Amphibians

Northern Leopard Frog *Rana pipiens*
Idaho Giant Salamander *Dicamptodon aterrimus*

Birds

Northern Pintail *Anas acuta*
Lesser Scaup *Aythya affinis*
Greater Sage-Grouse *Centrocercus urophasianus*
Black-crowned Night-Heron *Nycticorax nycticorax*
Bald Eagle *Haliaeetus leucocephalus*^a
Swainson's Hawk *Buteo swainsoni*
Ferruginous Hawk *Buteo regalis*
Merlin *Falco columbarius*
Peregrine Falcon *Falco peregrinus*
Sandhill Crane *Grus canadensis*
Long-billed Curlew *Numenius americanus*
Wilson's Phalarope *Phalaropus tricolor*
California Gull *Larus californicus*
Caspian Tern *Sterna caspia*
Flammulated Owl *Otus flammeolus*
Burrowing Owl *Athene cunicularia*
Short-eared Owl *Asio flammeus*
Boreal Owl *Aegolius funereus*^a
Lewis's Woodpecker *Melanerpes lewis*
White-headed Woodpecker *Picoides albolarvatus*
American Three-toed Woodpecker *Picoides dorsalis*^a
Pygmy Nuthatch *Sitta pygmaea*^a
Brewer's Sparrow *Spizella breweri*
Grasshopper Sparrow *Ammodramus savannarum*
Black Rosy-Finch *Leucosticte atrata*^a
Lesser Goldfinch *Carduelis psaltria*

Mammals

Merriam's Shrew *Sorex merriami*
Dwarf Shrew *Sorex nanus*

Townsend's Big-eared Bat *Corynorhinus townsendii*
 Pygmy Rabbit *Brachylagus idahoensis*
 Red-tailed Chipmunk *Neotamias ruficaudus*
 Wyoming Ground Squirrel *Spermophilus elegans*
 Great Basin Ground Squirrel *Spermophilus mollis*
 Gray Wolf *Canis lupus*^a
 Kit Fox *Vulpes macrotis*
 Fisher *Martes pennanti*
 Wolverine *Gulo gulo*^a
 Canada Lynx *Lynx canadensis*
 Mountain Goat *Oreamnos americanus*^a

Arachnids

A Cave Obligate Mite *Flabellorhagidia pecki*^a
 A Cave Obligate Harvestman *Speleomaster pecki*^a

Insects

A Mayfly *Centroptilum selanderorum*
 Sagebrush Spur-throat Grasshopper *Melanoplus artemesiae*
 A Spur-throat Grasshopper *Melanoplus digitifer*
 A Grasshopper *Argiacris keithi*^a
 A Grasshopper *Argiacris militaris*^a
 A Stonefly *Bolshecapnia milami*^a
 A Spring Stonefly *Malenka tina*
 A Stonefly *Isoperla bifurcata*^a
 Blind Cave Leiodid Beetle *Glacicavicola bathyscioides*

^a Species for which the Challis Volcanics represents a significant portion of their Idaho range.

Habitats in the Challis Volcanics

| HABITAT | AREA (km ²) | AREA (ac) | PERCENT |
|-------------------------|-------------------------|-----------|---------|
| Urban | 20 | 4944 | <1 |
| Arableland | 182 | 44,886 | 1 |
| Non-native Herbaceous | 62 | 15,270 | <1 |
| Upland Deciduous Forest | 121 | 29,848 | 1 |
| Southern Woodland | 38 | 9331 | <1 |

| HABITAT | AREA (km ²) | AREA (ac) | PERCENT |
|-------------------------------------|-------------------------|------------------|------------|
| Dry Conifer Forest | 2779 | 686,642 | 19 |
| Subalpine Forest | 5012 | 1,238,548 | 35 |
| Mesic Deciduous Shrubland | 319 | 78,924 | 2 |
| Southern Xeric Shrubland and Steppe | 4695 | 1,160,031 | 33 |
| Dry Grassland | 98 | 24,240 | 1 |
| Subalpine Grassland | 226 | 55,810 | 2 |
| Alpine | 410 | 101,195 | 3 |
| Southern Wetland | 15 | 3630 | <1 |
| Riparian Woodland | 266 | 65,806 | 2 |
| Dune, Canyon, and Rockland | 38 | 9323 | <1 |
| Total | 14,281 | 3,528,428 | 100 |

Table 12: Challis Volcanics Habitats

Priority Habitats and Associated Vertebrate Species in the Challis Volcanics

Dry Conifer Forest

Lampreys

Pacific Lamprey *Lampetra tridentata*

Fishes

Westslope Cutthroat Trout *Oncorhynchus clarkii lewisi*

Steelhead (Snake River basin) *Oncorhynchus mykiss gairdneri*

Sockeye Salmon (Snake River) *Oncorhynchus nerka*

Kokanee *Oncorhynchus nerka*

Chinook Salmon (Snake River spring/summer-run) *Oncorhynchus tshawytscha*

Bull Trout *Salvelinus confluentus*

Amphibians

Idaho Giant Salamander *Dicamptodon aterrimus*

Birds

Bald Eagle *Haliaeetus leucocephalus*

Peregrine Falcon *Falco peregrinus*

Boreal Owl *Aegolius funereus*

White-headed Woodpecker *Picoides albolarvatus*
American Three-toed Woodpecker *Picoides dorsalis*
Pygmy Nuthatch *Sitta pygmaea*

Mammals

Townsend's Big-eared Bat *Corynorhinus townsendii*
Red-tailed Chipmunk *Neotamias ruficaudus*
Gray Wolf *Canis lupus*
Fisher *Martes pennanti*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*
Mountain Goat *Oreamnos americanus*

Subalpine Forest

Lampreys

Pacific Lamprey *Lampetra tridentata*

Fishes

Westslope Cutthroat Trout *Oncorhynchus clarkii lewisi*
Steelhead (Snake River basin) *Oncorhynchus mykiss gairdneri*
Sockeye Salmon (Snake River) *Oncorhynchus nerka*
Kokanee *Oncorhynchus nerka*
Chinook Salmon (Snake River spring/summer-run) *Oncorhynchus tshawytscha*
Bull Trout *Salvelinus confluentus*

Amphibians

Idaho Giant Salamander *Dicamptodon aterrimus*

Birds

Bald Eagle *Haliaeetus leucocephalus*
Merlin *Falco columbarius*
Peregrine Falcon *Falco peregrinus*
Boreal Owl *Aegolius funereus*
Black Swift *Cypseloides niger*
American Three-toed Woodpecker *Picoides dorsalis*
Pygmy Nuthatch *Sitta pygmaea*
Black Rosy-Finch *Leucosticte atrata*
Lesser Goldfinch *Carduelis psaltria*

Mammals

Dwarf Shrew *Sorex nanus*
Red-tailed Chipmunk *Neotamias ruficaudus*
Gray Wolf *Canis lupus*
Fisher *Martes pennanti*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*
Mountain Goat *Oreamnos americanus*

Southern Xeric Shrubland and Steppe

Fishes

Sockeye Salmon (Snake River) *Oncorhynchus nerka*

Amphibians

Northern Leopard Frog *Rana pipiens*

Birds

Greater Sage-Grouse *Centrocercus urophasianus*
Merlin *Falco columbarius*
Peregrine Falcon *Falco peregrinus*
Long-billed Curlew *Numenius americanus*
Burrowing Owl *Athene cunicularia*
Lesser Goldfinch *Carduelis psaltria*

Mammals

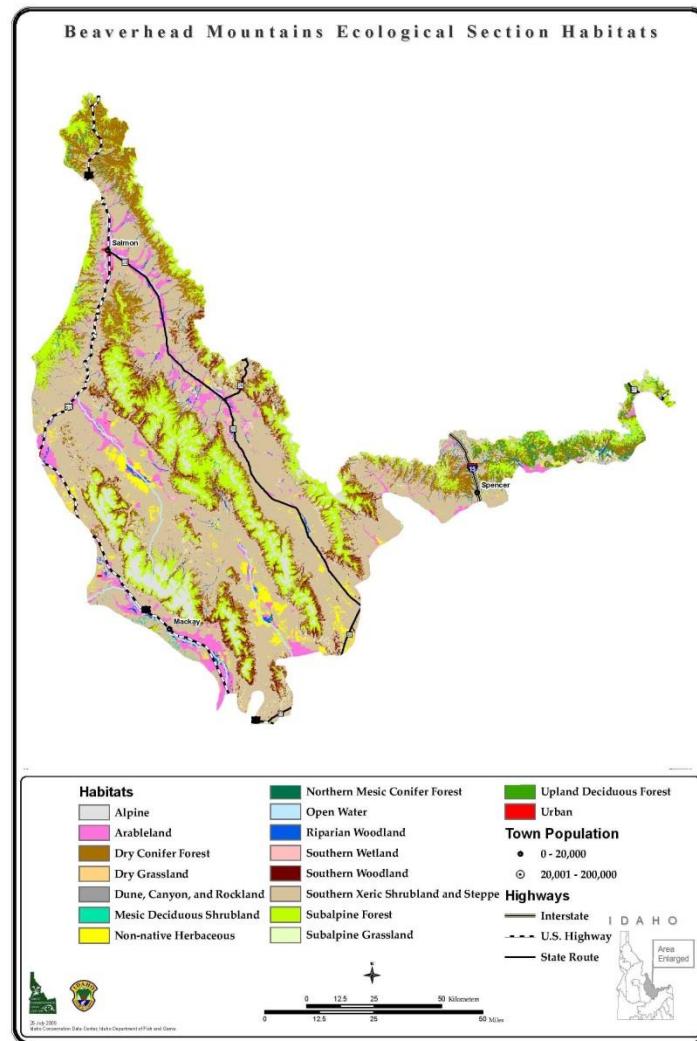
Townsend's Big-eared Bat *Corynorhinus townsendii*
Pygmy Rabbit *Brachylagus idahoensis*
Wyoming Ground Squirrel *Spermophilus elegans*
Great Basin Ground Squirrel *Spermophilus mollis*

Beaverhead Mountains Ecological Section

This area includes the highest mountain ranges in the state and landscapes are characterized by sharp alpine ridges, cirques and glacial valleys at higher elevations contrasting with wide, dry valleys, alluvial terraces and flood plains at lower elevations. Intermittent streams are common indicating the arid nature of the area. Lakes occur in glaciated areas at higher elevations. Major rivers include the Lemhi, Beaverhead, Big Lost and Little Lost Rivers. Elevation ranges from 1100–3860 m (3600–12,662 ft). Mountain soils are generally shallow to moderately deep loam and sandy containing rock fragments. Valley soils are moderately deep loam and clay.

Annual precipitation ranges from 25–127 cm (10–50 in) with most precipitation falling as snow in the fall, winter, and spring. Winters are cold and growing season conditions are dry. Soil moisture is not sufficient for tree growth on some south and west aspects below timberline and grasslands often extend from the valley floors to the mountain tops. Average annual temperature is 2–8°C (36–46°F). The growing season ranges from 45–100 days.

Communities occur primarily at lower elevations along rivers and are sparse and small. Livestock grazing is the dominant land use. Timber harvesting, mining, and recreation are also important land uses.



| LAND USE | AREA (ha) | AREA (ac) | PERCENT |
|---------------------|-----------|-----------|---------|
| Dryland Agriculture | 938 | 2319 | <1 |
| Timberland | 512,144 | 1,265,530 | 31 |

| LAND USE | AREA (ha) | AREA (ac) | PERCENT |
|------------------------|------------------|------------------|------------|
| Irrigated–Gravity Flow | 79,118 | 195,504 | 5 |
| Irrigated–Sprinkler | 68,807 | 170,026 | 4 |
| Rangeland | 971,166 | 2,399,794 | 59 |
| Riparian | 2925 | 7227 | <1 |
| Urban | 7311 | 18,067 | <1 |
| Water | 589 | 1454 | <1 |
| Total | 1,642,998 | 4,059,921 | 100 |

| LAND OWNERSHIP | AREA (ha) | AREA (ac) | PERCENT |
|--------------------------------|------------------|------------------|------------|
| USDI Bureau of Land Management | 591,144 | 1,460,742 | 36 |
| US Department of Energy | 18,327 | 45,287 | 1 |
| USDA Forest Service | 780,309 | 1,928,178 | 47 |
| Open water | 1493 | 3689 | <1 |
| Private | 210,303 | 519,668 | 13 |
| State of Idaho | 41,667 | 102,960 | 3 |
| Total | 1,643,243 | 4,060,525 | 100 |

Table 13: Beaverhead Mountains Land Use and Land Ownership

Species of Greatest Conservation Need in the Beaverhead Mountains

Lampreys

Pacific Lamprey *Lampetra tridentata*

Fishes

Yellowstone Cutthroat Trout *Oncorhynchus clarkii bouvieri*

Westslope Cutthroat Trout *Oncorhynchus clarkii lewisi*

Steelhead (Snake River basin) *Oncorhynchus mykiss gairdneri*^a

Sockeye Salmon (Snake River) *Oncorhynchus nerka*^a

Chinook Salmon (Snake River spring/summer-run) *Oncorhynchus tshawytscha*^a

Bull Trout *Salvelinus confluentus*^a

Amphibians

Northern Leopard Frog *Rana pipiens*

Birds

Trumpeter Swan *Cygnus buccinator*
Northern Pintail *Anas acuta*
Lesser Scaup *Aythya affinis*
Harlequin Duck *Histrionicus histrionicus*
Hooded Merganser *Lophodytes cucullatus*
Greater Sage-Grouse *Centrocercus urophasianus*
Sharp-tailed Grouse *Tympanuchus phasianellus*
Red-necked Grebe *Podiceps grisegena*
Western Grebe *Aechmophorus occidentalis*
Black-crowned Night-Heron *Nycticorax nycticorax*
White-faced Ibis *Plegadis chihi*
Bald Eagle *Haliaeetus leucocephalus*
Swainson's Hawk *Buteo swainsoni*
Ferruginous Hawk *Buteo regalis*
Merlin *Falco columbarius*
Peregrine Falcon *Falco peregrinus*
Sandhill Crane *Grus canadensis*
Long-billed Curlew *Numenius americanus*
Wilson's Phalarope *Phalaropus tricolor*
Franklin's Gull *Larus pipixcan*
California Gull *Larus californicus*
Caspian Tern *Sterna caspia*
Forster's Tern *Sterna forsteri*
Black Tern *Chlidonias niger*
Yellow-billed Cuckoo *Coccyzus americanus*
Flammulated Owl *Otus flammeolus*
Burrowing Owl *Athene cunicularia*
Short-eared Owl *Asio flammeus*
Boreal Owl *Aegolius funereus*
Lewis's Woodpecker *Melanerpes lewis*
American Three-toed Woodpecker *Picoides dorsalis*
Pygmy Nuthatch *Sitta pygmaea*
Brewer's Sparrow *Spizella breweri*
Grasshopper Sparrow *Ammodramus savannarum*
Black Rosy-Finch *Leucosticte atrata*^a
Lesser Goldfinch *Carduelis psaltria*

Mammals

Merriam's Shrew *Sorex merriami*
Dwarf Shrew *Sorex nanus*
California Myotis *Myotis californicus*
Townsend's Big-eared Bat *Corynorhinus townsendii*
Pygmy Rabbit *Brachylagus idahoensis*^a
Red-tailed Chipmunk *Neotamias ruficaudus*
Wyoming Ground Squirrel *Spermophilus elegans*^a
Great Basin Ground Squirrel *Spermophilus mollis*
Idaho Pocket Gopher *Thomomys idahoensis*
Townsend's Pocket Gopher *Thomomys townsendii*
Gray Wolf *Canis lupus*
Kit Fox *Vulpes macrotis*
Grizzly or Brown Bear *Ursus arctos*
Fisher *Martes pennanti*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*
Mountain Goat *Oreamnos americanus*

Bivalves

Western Pearlshell *Margaritifera falcata*^a

Gastropods

Rustic Pondsail *Stagnicola hinkleyi*^a

Insects

A Mayfly *Caurinella idahoensis*
A Mayfly *Ameletus sparsatus*
A Mayfly *Centroptilum selanderorum*
A Mayfly *Cinygma dimicki*^a
Sagebrush Spur-throat Grasshopper *Melanoplus artemesiae*^a
A Spur-throat Grasshopper *Melanoplus idaho*^a
A Spur-throat Grasshopper *Melanoplus lemhensis*^a
A Spur-throat Grasshopper *Melanoplus papyraedus*^a
A Spur-throat Grasshopper *Melanoplus salmonis*^a
A Spur-throat Grasshopper *Melanoplus trigeminus*^a
Idaho Point-headed Grasshopper *Acrolophitus pulchellus*^a
A Grasshopper *Argiacris amissuli*^a
A Grasshopper *Argiacris militaris*
A Grasshopper *Barracris petraea*^a

- A Spring Stonefly *Malenka tina*
A Tiger Beetle *Cicindela plutonica*
An Agapetus Caddisfly *Agapetus montanus*^a
Relict Fritillary *Boloria kriemhild*
Gillette's Checkerspot *Euphydryas gillettii*

^a Species for which the Beaverhead Mountains represents a significant portion of their Idaho range.

Habitats in the Beaverhead Mountains

| HABITAT | AREA (km ²) | AREA (ac) | PERCENT |
|-------------------------------------|-------------------------|------------------|------------|
| Urban | 25 | 6180 | <1 |
| Arableland | 1013 | 250,419 | 6 |
| Non-native Herbaceous | 387 | 95,662 | 2 |
| Upland Deciduous Forest | 174 | 42,956 | 1 |
| Southern Woodland | 400 | 98,851 | 2 |
| Dry Conifer Forest | 2280 | 563,415 | 14 |
| Subalpine Forest | 2342 | 578,464 | 14 |
| Mesic Deciduous Shrubland | 71 | 17,427 | <1 |
| Southern Xeric Shrubland and Steppe | 8192 | 2,024,317 | 50 |
| Dry Grassland | 39 | 9696 | <1 |
| Subalpine Grassland | 372 | 91,889 | 2 |
| Alpine | 707 | 174,708 | 4 |
| Open Water | 10 | 2353 | <1 |
| Southern Wetland | 80 | 19,778 | <1 |
| Riparian Woodland | 327 | 80,832 | 2 |
| Total | 16,419 | 4,056,947 | 100 |

Table 14: Beaverhead Mountains Habitats

Priority Habitats and Associated Vertebrate Species in the Beaverhead Mountains

Arableland

Lampreys

Pacific Lamprey *Lampetra tridentata*

Fishes

Sockeye Salmon (Snake River) *Oncorhynchus nerka*

Chinook Salmon (Snake River spring/summer-run) *Oncorhynchus tshawytscha*

Amphibians

Northern Leopard Frog *Rana pipiens*

Birds

Northern Pintail *Anas acuta*

Greater Sage-Grouse *Centrocercus urophasianus*

Black-crowned Night-Heron *Nycticorax nycticorax*

White-faced Ibis *Plegadis chihi*

Black-necked Stilt *Himantopus mexicanus*

Long-billed Curlew *Numenius americanus*

Franklin's Gull *Larus pipixcan*

California Gull *Larus californicus*

Forster's Tern *Sterna forsteri*

Mammals

Wyoming Ground Squirrel *Spermophilus elegans*

Townsend's Pocket Gopher *Thomomys townsendii*

Dry Conifer Forest

Lampreys

Pacific Lamprey *Lampetra tridentata*

Fishes

Yellowstone Cutthroat Trout *Oncorhynchus clarkii bouvieri*

Westslope Cutthroat Trout *Oncorhynchus clarkii lewisi*

Steelhead (Snake River basin) *Oncorhynchus mykiss gairdneri*

Sockeye Salmon (Snake River) *Oncorhynchus nerka*

Chinook Salmon (Snake River spring/summer-run) *Oncorhynchus tshawytscha*

Bull Trout *Salvelinus confluentus*

Birds

Harlequin Duck *Histrionicus histrionicus*

Bald Eagle *Haliaeetus leucocephalus*
Merlin *Falco columbarius*
Peregrine Falcon *Falco peregrinus*
Boreal Owl *Aegolius funereus*
American Three-toed Woodpecker *Picoides dorsalis*
Pygmy Nuthatch *Sitta pygmaea*

Mammals

Townsend's Big-eared Bat *Corynorhinus townsendii*
Red-tailed Chipmunk *Neotamias ruficaudus*
Gray Wolf *Canis lupus*
Grizzly or Brown Bear *Ursus arctos*
Fisher *Martes pennanti*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*
Mountain Goat *Oreamnos americanus*

Subalpine Forest

Fishes

Yellowstone Cutthroat Trout *Oncorhynchus clarkii bouvieri*

Birds

Harlequin Duck *Histrionicus histrionicus*
Bald Eagle *Haliaeetus leucocephalus*
Boreal Owl *Aegolius funereus*
American Three-toed Woodpecker *Picoides dorsalis*
Pygmy Nuthatch *Sitta pygmaea*
Black Rosy-Finch *Leucosticte atrata*

Mammals

Dwarf Shrew *Sorex nanus*
Red-tailed Chipmunk *Neotamias ruficaudus*
Gray Wolf *Canis lupus*
Grizzly or Brown Bear *Ursus arctos*
Fisher *Martes pennanti*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*
Mountain Goat *Oreamnos americanus*

Southern Xeric Shrubland and Steppe

Lampreys

Pacific Lamprey *Lampetra tridentata*

Fishes

Yellowstone Cutthroat Trout *Oncorhynchus clarkii bouvieri*

Westslope Cutthroat Trout *Oncorhynchus clarkii lewisi*

Steelhead (Snake River basin) *Oncorhynchus mykiss gairdneri*

Sockeye Salmon (Snake River) *Oncorhynchus nerka*

Chinook Salmon (Snake River spring/summer-run) *Oncorhynchus tshawytscha*

Bull Trout *Salvelinus confluentus*

Amphibians

Northern Leopard Frog *Rana pipiens*

Birds

Hooded Merganser *Lophodytes cucullatus*

Greater Sage-Grouse *Centrocercus urophasianus*

Sharp-tailed Grouse *Tympanuchus phasianellus*

Merlin *Falco columbarius*

Peregrine Falcon *Falco peregrinus*

Long-billed Curlew *Numenius americanus*

Burrowing Owl *Athene cunicularia*

Grasshopper Sparrow *Ammodramus savannarum*

Lesser Goldfinch *Carduelis psaltria*

Mammals

Merriam's Shrew *Sorex merriami*

Townsend's Big-eared Bat *Corynorhinus townsendii*

Pygmy Rabbit *Brachylagus idahoensis*

Wyoming Ground Squirrel *Spermophilus elegans*

Great Basin Ground Squirrel *Spermophilus mollis*

Idaho Pocket Gopher *Thomomys idahoensis*

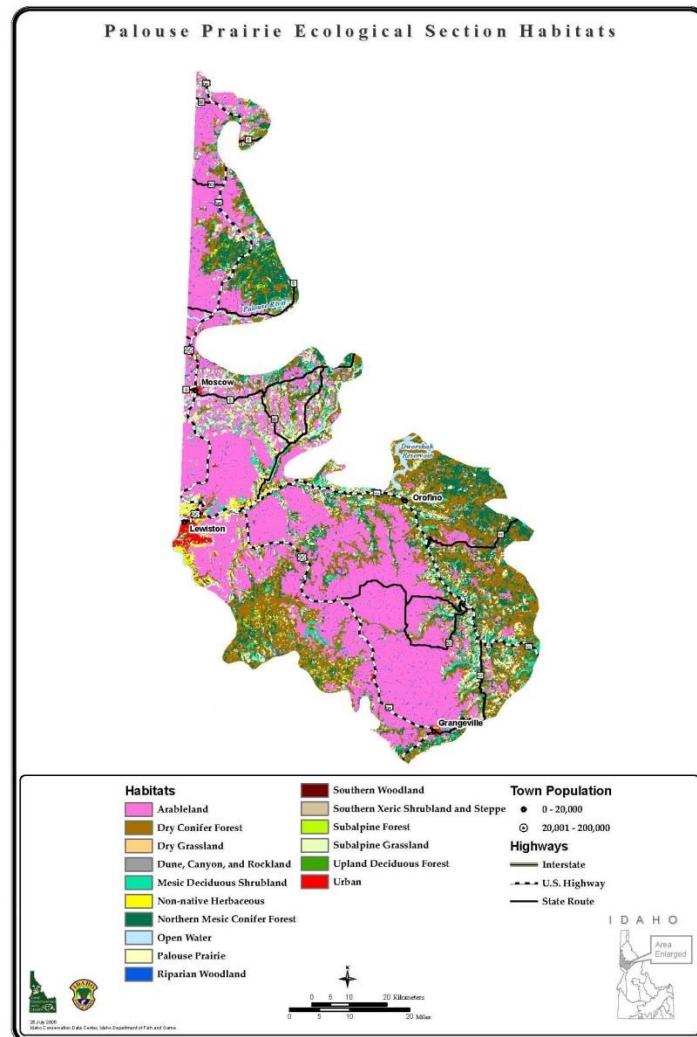
Grizzly or Brown Bear *Ursus arctos*

Columbia Plateau Ecoregion

Palouse Prairie Ecological Section

This section is characterized by dissected loess-covered basalt plains, undulating plateaus, and river breaklands. Elevation ranges from 220–1700 m (720–5700 ft). Soils are generally deep, loamy to silty and have formed in loess, alluvium or glacial outwash. The lower reaches and confluence of the Snake and Clearwater Rivers are major water bodies.

Climate is maritime influenced. Precipitation ranges from 25–76 cm (10–30 in) annually, falling primarily during the fall, winter, and spring. Winter precipitation is mostly snow. Summers are relatively dry. Average annual temperature ranges from 45–54°F (7–12°C). The growing season varies with elevation and lasts 100–170 days.



Population centers include Lewiston, Moscow and small agricultural communities dispersed throughout.

| LAND USE | AREA (ha) | AREA (ac) | PERCENT |
|---------------------|----------------|------------------|------------|
| Dryland Agriculture | 654,399 | 1,617,050 | 81 |
| Timberland | 138,861 | 343,132 | 17 |
| Rangeland | 5082 | 12,558 | 1 |
| Urban | 4860 | 12,008 | 1 |
| Water | 3441 | 8504 | <1 |
| Total | 806,644 | 1,993,252 | 100 |

| LAND OWNERSHIP | AREA (ha) | AREA (ac) | PERCENT |
|--------------------------------|----------------|------------------|------------|
| USDI Bureau of Land Management | 9121 | 22,539 | 1 |
| USDI Bureau of Indian Affairs | 12,403 | 30,650 | 2 |
| USDA Forest Service | 10,102 | 24,963 | 1 |
| US Department of Defense | 585 | 1446 | <1 |
| USDI National Park Service | 60 | 149 | <1 |
| Open water | 5355 | 13,234 | 1 |
| Private | 725,922 | 1,793,785 | 90 |
| State of Idaho | 43,034 | 106,340 | 5 |
| Total | 806,584 | 1,993,105 | 100 |

Table 15: Palouse Prairie Land Use and Land Ownership

Species of Greatest Conservation Need in the Palouse Prairie

Lampreys

Pacific Lamprey *Lampetra tridentata*^a

Fishes

White Sturgeon (Snake River system) *Acipenser transmontanus*

Westslope Cutthroat Trout *Oncorhynchus clarkii lewisi*

Inland Redband Trout *Oncorhynchus mykiss gairdneri*

Steelhead (Snake River basin) *Oncorhynchus mykiss gairdneri*^a

Sockeye Salmon (Snake River) *Oncorhynchus nerka*

Chinook Salmon (Snake River fall-run) *Oncorhynchus tshawytscha*^a

Chinook Salmon (Snake River spring/summer-run) *Oncorhynchus tshawytscha*^a

Bull Trout *Salvelinus confluentus*

Sand Roller *Percopsis transmontana*^a

Amphibians

Woodhouse's Toad *Bufo woodhousii*

Idaho Giant Salamander *Dicamptodon aterrimus*^a

Coeur d'Alene Salamander *Plethodon idahoensis*^a

Reptiles

Northern Alligator Lizard *Elgaria coerulea*

Ring-necked Snake *Diadophis punctatus*^a

Birds

Northern Pintail *Anas acuta*
Lesser Scaup *Aythya affinis*
Harlequin Duck *Histrionicus histrionicus*
Hooded Merganser *Lophodytes cucullatus*
Mountain Quail *Oreortyx pictus*
Red-necked Grebe *Podiceps grisegena*
Western Grebe *Aechmophorus occidentalis*
Bald Eagle *Haliaeetus leucocephalus*
Swainson's Hawk *Buteo swainsoni*
Merlin *Falco columbarius*
Peregrine Falcon *Falco peregrinus*
Long-billed Curlew *Numenius americanus*
California Gull *Larus californicus*
Yellow-billed Cuckoo *Coccyzus americanus*
Flammulated Owl *Otus flammeolus*
Short-eared Owl *Asio flammeus*
Boreal Owl *Aegolius funereus*
Lewis's Woodpecker *Melanerpes lewis*
White-headed Woodpecker *Picoides albolarvatus*
American Three-toed Woodpecker *Picoides dorsalis*
Pygmy Nuthatch *Sitta pygmaea*
Grasshopper Sparrow *Ammodramus savannarum*
Black Rosy-Finch *Leucosticte atrata*

Mammals

Pygmy Shrew *Sorex hoyi*
California Myotis *Myotis californicus*
Fringed Myotis *Myotis thysanodes*
Townsend's Big-eared Bat *Corynorhinus townsendii*
Red-tailed Chipmunk *Neotamias ruficaudus*
Gray Wolf *Canis lupus*
Fisher *Martes pennanti*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*

Bivalves

Western Ridged Mussel *Gonidea angulata*

Gastropods

- Fir Pinwheel *Radiodiscus abietum*
- Salmon Coil *Helicodiscus salmonaceus*
- Nimapuna Tigersnail *Anguispira nimapuna*
- Pale Jumping-slug *Hemphillia camelus*
- Lyre Mantleslug *Udosarx lyrata*
- Thinlip Tightcoil *Pristiloma idahoense*
- Dry Land Forestsnail *Allogona ptychophora solida*
- Mission Creek Oregonian *Cryptomastix magnidentata^a*
- An Oregonian (Lower Salmon River) *Cryptomastix mullani latilabris^a*
- An Oregonian (Lower Clearwater River) *Cryptomastix mullani tuckeri*
- An Oregonian (Hells Canyon) *Cryptomastix populi*
- Humped Coin *Polygyrella polygyrella^a*

Insects

- A Mayfly *Paraleptophlebia traverae^a*
- A Mayfly *Parameletus columbiae*
- A Spur-throat Grasshopper *Melanoplus digitifer*
- A Spur-throat Grasshopper *Melanoplus payettei*
- A Stonefly *Capnia lineata^a*
- A Stonefly *Capnia zukeli^a*
- A Stonefly *Perlomyia collaris^a*
- A Stonefly *Soyedina potteri^a*
- A Stonefly *Taenionema umatilla^a*
- Gillette's Checkerspot *Euphydryas gillettii*

^a Species for which the Palouse Prairie represents a significant portion of their Idaho range.

Habitats in the Palouse Prairie

| HABITAT | AREA (km ²) | AREA (ac) | PERCENT |
|-------------------------|-------------------------|-----------|---------|
| Urban | 65 | 16,119 | 1 |
| Arableland | 3389 | 837,538 | 42 |
| Upland Deciduous Forest | 19 | 4792 | <1 |
| Southern Woodland | 18 | 4364 | <1 |
| Dry Conifer Forest | 1860 | 459,692 | 23 |

| HABITAT | AREA (km ²) | AREA (ac) | PERCENT |
|-------------------------------|-------------------------|------------------|------------|
| Northern Mesic Conifer Forest | 1008 | 249,131 | 13 |
| Subalpine Forest | 31 | 7733 | <1 |
| Mesic Deciduous Shrubland | 352 | 87,003 | 4 |
| Dry Grassland | 6 | 1505 | <1 |
| Palouse Prairie | 799 | 197,502 | 10 |
| Subalpine Grassland | 67 | 16,656 | 1 |
| Open Water | 62 | 15,304 | 1 |
| Riparian Woodland | 193 | 47,527 | 2 |
| Dune, Canyon, and Rockland | 122 | 30,098 | 2 |
| Total | 7991 | 1,974,964 | 100 |

Table 16: Palouse Prairie Habitats

Priority Habitats and Associated Vertebrate Species in the Palouse Prairie

Arableland

Lampreys

Pacific Lamprey *Lampetra tridentata*

Fishes

White Sturgeon (Snake River system) *Acipenser transmontanus*

Westslope Cutthroat Trout *Oncorhynchus clarkii lewisi*

Steelhead (Snake River basin) *Oncorhynchus mykiss gairdneri*

Sockeye Salmon (Snake River) *Oncorhynchus nerka*

Chinook Salmon (Snake River fall-run) *Oncorhynchus tshawytscha*

Chinook Salmon (Snake River spring/summer-run) *Oncorhynchus tshawytscha*

Birds

Northern Pintail *Anas acuta*

Merlin *Falco columbarius*

Upland Sandpiper *Bartramia longicauda*

Long-billed Curlew *Numenius americanus*

California Gull *Larus californicus*

Grasshopper Sparrow *Ammodramus savannarum*

Black Rosy-Finch *Leucosticte atrata*

Dry Conifer Forest

Lampreys

Pacific Lamprey *Lampetra tridentata*

Fishes

White Sturgeon (Snake River system) *Acipenser transmontanus*

Westslope Cutthroat Trout *Oncorhynchus clarkii lewisi*

Steelhead (Snake River basin) *Oncorhynchus mykiss gairdneri*

Sockeye Salmon (Snake River) *Oncorhynchus nerka*

Chinook Salmon (Snake River fall-run) *Oncorhynchus tshawytscha*

Chinook Salmon (Snake River spring/summer-run) *Oncorhynchus tshawytscha*

Bull Trout *Salvelinus confluentus*

Amphibians

Idaho Giant Salamander *Dicamptodon aterrimus*

Coeur d'Alene Salamander *Plethodon idahoensis*

Reptiles

Ring-necked Snake *Diadophis punctatus*

Birds

Harlequin Duck *Histrionicus histrionicus*

Hooded Merganser *Lophodytes cucullatus*

Mountain Quail *Oreortyx pictus*

Bald Eagle *Haliaeetus leucocephalus*

Merlin *Falco columbarius*

Peregrine Falcon *Falco peregrinus*

Boreal Owl *Aegolius funereus*

White-headed Woodpecker *Picoides albolarvatus*

American Three-toed Woodpecker *Picoides dorsalis*

Pygmy Nuthatch *Sitta pygmaea*

Grasshopper Sparrow *Ammodramus savannarum*

Mammals

Pygmy Shrew *Sorex hoyi*

Fringed Myotis *Myotis thysanodes*

Townsend's Big-eared Bat *Corynorhinus townsendii*

Gray Wolf *Canis lupus*

Fisher *Martes pennanti*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*

Northern Mesic Conifer Forest

Fishes

Westslope Cutthroat Trout *Oncorhynchus clarkii lewisi*
Bull Trout *Salvelinus confluentus*

Amphibians

Idaho Giant Salamander *Dicamptodon aterrimus*
Coeur d'Alene Salamander *Plethodon idahoensis*

Birds

Harlequin Duck *Histrionicus histrionicus*
Bald Eagle *Haliaeetus leucocephalus*
Peregrine Falcon *Falco peregrinus*
Boreal Owl *Aegolius funereus*
White-headed Woodpecker *Picoides albolarvatus*
American Three-toed Woodpecker *Picoides dorsalis*
Pygmy Nuthatch *Sitta pygmaea*

Mammals

Pygmy Shrew *Sorex hoyi*
Townsend's Big-eared Bat *Corynorhinus townsendii*
Red-tailed Chipmunk *Neotamias ruficaudus*
Gray Wolf *Canis lupus*
Fisher *Martes pennanti*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*

Palouse Prairie

Lampreys

Pacific Lamprey *Lampetra tridentata*

Fishes

Steelhead (Snake River basin) *Oncorhynchus mykiss gairdneri*
Chinook Salmon (Snake River fall-run) *Oncorhynchus tshawytscha*
Chinook Salmon (Snake River spring/summer-run) *Oncorhynchus tshawytscha*

Bull Trout *Salvelinus confluentus*

Reptiles

Ring-necked Snake *Diadophis punctatus*

Birds

Merlin *Falco columbarius*

Long-billed Curlew *Numenius americanus*

California Gull *Larus californicus*

Yellow-billed Cuckoo *Coccyzus americanus*

Grasshopper Sparrow *Ammodramus savannarum*

Black Rosy-Finch *Leucosticte atrata*

Mammals

Fringed Myotis *Myotis thysanodes*

Townsend's Big-eared Bat *Corynorhinus townsendii*

Gray Wolf *Canis lupus*

Riparian Woodland

Amphibians

Coeur d'Alene Salamander *Plethodon idahoensis*

Reptiles

Ring-necked Snake *Diadophis punctatus*

Birds

Northern Pintail *Anas acuta*

Harlequin Duck *Histrionicus histrionicus*

Hooded Merganser *Lophodytes cucullatus*

Upland Sandpiper *Bartramia longicauda*

California Gull *Larus californicus*

Mammals

Pygmy Shrew *Sorex hoyi*

Fisher *Martes pennanti*

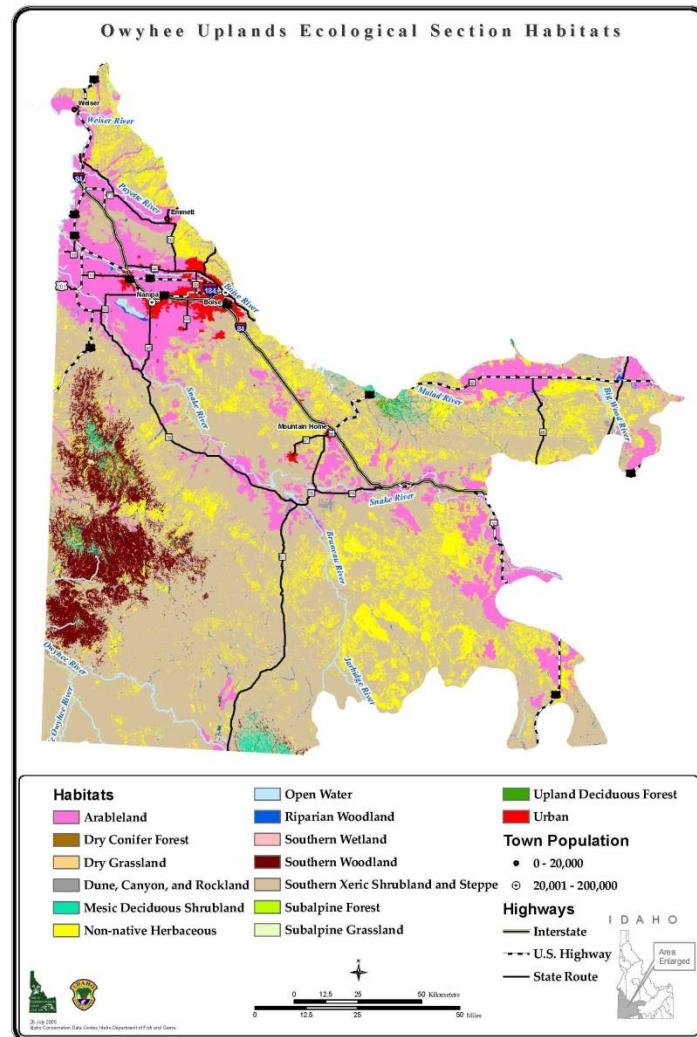
Canada Lynx *Lynx canadensis*

Owyhee Uplands Ecological Section

This area is characterized by deeply dissected canyons formed through the combination of erosion and geologic uplifting. Lava formations are prevalent and are older than those of the Snake River Plain. The Owyhee Mountains are composed primarily of granite and most of the uplands are rhyolites, ash deposits and wind-blown loess. Elevation ranges from 1200–2500 m (4000–8000 ft). The Snake, Owyhee, and Bruneau Rivers are the major water bodies and are among the few perennial water bodies represented. Small streams are typically intermittent and arise from snow accumulation at the higher elevations but some streams are fed by springs. Few small lakes and reservoirs are present.

Precipitation ranges from 20–40 cm (7–15 in) annually. Much precipitation is lost to evaporation during summer months. Average annual temperature ranges from 2–8°C (35–45°F). The growing season varies with elevation, ranging from 120 days to less than 60 days at higher elevations.

Residential communities are small and sparsely distributed in the central and southern parts of the region but the northern part of the section is the urban center of the state containing about half of the state's population. Livestock grazing, dryland and irrigated agriculture and recreation are the major land uses.



| LAND USE | AREA (ha) | AREA (ac) | PERCENT |
|------------------------|-----------|-----------|---------|
| Dryland Agriculture | 78,109 | 193,010 | 2 |
| Forest | 134,530 | 332,429 | 4 |
| Irrigated-Gravity Flow | 331,319 | 818,705 | 10 |

| LAND USE | AREA (ha) | AREA (ac) | PERCENT |
|---------------------|------------------|------------------|------------|
| Irrigated—Sprinkler | 157,524 | 389,249 | 5 |
| Rangeland | 2,600,444 | 6,425,811 | 75 |
| Riparian | 98,874 | 244,321 | 3 |
| Rock | 1388 | 3429 | <1 |
| Urban | 40,278 | 99,529 | 1 |
| Water | 10,467 | 25,865 | <1 |
| Total | 3,452,932 | 8,532,347 | 100 |

| LAND OWNERSHIP | AREA (ha) | AREA (ac) | PERCENT |
|--------------------------------|------------------|------------------|------------|
| USDI Bureau of Land Management | 2,019,559 | 4,990,420 | 58 |
| USDI Bureau of Indian Affairs | 58,153 | 143,699 | 2 |
| USDI Bureau of Reclamation | 75,000 | 185,327 | 2 |
| USDA Forest Service | 2035 | 5029 | <1 |
| US Department of Defense | 45,147 | 111,560 | 1 |
| USDI National Park Service | 1509 | 3729 | <1 |
| Open water | 20,081 | 49,622 | 1 |
| Private | 1,031,460 | 2,548,782 | 30 |
| State of Idaho | 199,360 | 492,627 | 6 |
| USDI Fish and Wildlife Service | 569 | 1406 | <1 |
| Total | 3,452,873 | 8,532,201 | 100 |

Table 17: Owyhee Uplands Land Use and Land Ownership

Species of Greatest Conservation Need in the Owyhee Uplands

Fishes

White Sturgeon (Snake River system) *Acipenser transmontanus*^a

Leopard Dace *Rhinichthys falcatus*^a

Umatilla Dace *Rhinichthys umatilla*^a

Inland Redband Trout *Oncorhynchus mykiss gairdneri*^a

Bull Trout *Salvelinus confluentus*

Shoshone Sculpin *Cottus greenei*^a

Wood River Sculpin *Cottus leiopomus*^a

Amphibians

- Woodhouse's Toad *Bufo woodhousii*
Columbia Spotted Frog (populations south of the Snake River) *Rana luteiventris*
Northern Leopard Frog *Rana pipiens*^a

Reptiles

- Great Basin Collared Lizard *Crotaphytus bicinctores*^a
Ring-necked Snake *Diadophis punctatus*
Long-nosed Snake *Rhinocheilus lecontei*^a
Groundsnake *Sonora semiannulata*^a

Birds

- Northern Pintail *Anas acuta*^a
Lesser Scaup *Aythya affinis*
Hooded Merganser *Lophodytes cucullatus*
Greater Sage-Grouse *Centrocercus urophasianus*^a
Sharp-tailed Grouse *Tympanuchus phasianellus*
Mountain Quail *Oreortyx pictus*
Western Grebe *Aechmophorus occidentalis*
Clark's Grebe *Aechmophorus clarkii*
American White Pelican *Pelecanus erythrorhynchos*^a
Great Egret *Ardea alba*
Snowy Egret *Egretta thula*
Cattle Egret *Bubulcus ibis*
Black-crowned Night-Heron *Nycticorax nycticorax*^a
White-faced Ibis *Plegadis chihi*^a
Bald Eagle *Haliaeetus leucocephalus*
Swainson's Hawk *Buteo swainsoni*
Ferruginous Hawk *Buteo regalis*^a
Merlin *Falco columbarius*^a
Peregrine Falcon *Falco peregrinus*^a
Sandhill Crane *Grus canadensis*
Black-necked Stilt *Himantopus mexicanus*
American Avocet *Recurvirostra americana*^a
Upland Sandpiper *Bartramia longicauda*
Long-billed Curlew *Numenius americanus*^a
Wilson's Phalarope *Phalaropus tricolor*
Franklin's Gull *Larus pipixcan*
California Gull *Larus californicus*^a
Caspian Tern *Sterna caspia*^a

Forster's Tern *Sterna forsteri*
Black Tern *Chlidonias niger*
Burrowing Owl *Athene cunicularia*^a
Short-eared Owl *Asio flammeus*
Boreal Owl *Aegolius funereus*
Lewis's Woodpecker *Melanerpes lewis*
Juniper Titmouse *Baeolophus ridgwayi*
Virginia's Warbler *Vermivora virginiae*^a
Brewer's Sparrow *Spizella breweri*
Grasshopper Sparrow *Ammodramus savannarum*^a
Lesser Goldfinch *Carduelis psaltria*

Mammals

Merriam's Shrew *Sorex merriami*
Coast Mole *Scapanus orarius*
California Myotis *Myotis californicus*^a
Fringed Myotis *Myotis thysanodes*^a
Spotted Bat *Euderma maculatum*^a
Townsend's Big-eared Bat *Corynorhinus townsendii*^a
Pygmy Rabbit *Brachylagus idahoensis*^a
Southern Idaho Ground Squirrel *Spermophilus brunneus endemicus*^a
Columbia Plateau Ground Squirrel *Spermophilus canus*^a
Wyoming Ground Squirrel *Spermophilus elegans*^a
Great Basin Ground Squirrel *Spermophilus mollis*^a
Townsend's Pocket Gopher *Thomomys townsendii*^a
Little Pocket Mouse *Perognathus longimembris*
Dark Kangaroo Mouse *Microdipodops megacephalus*^a
Piñon Mouse *Peromyscus truei*^a
Gray Wolf *Canis lupus*
Kit Fox *Vulpes macrotis*
Bighorn Sheep (populations south of the Snake River) *Ovis canadensis*^a

Bivalves

California Floater *Anodonta californiensis*^a
Western Ridged Mussel *Gonidea angulata*

Gastropods

Bruneau Hot Springsnail *Pyrgulopsis bruneauensis*^a
A Springsnail *Pyrgulopsis robusta*^a
Bliss Rapids Snail *Taylorconcha serpenticola*^a
Desert Valvata *Valvata utahensis*^a
Rustic Pondsniail *Stagnicola hinkleyi*

Mountain Marshsnail *Stagnicola montanensis*
 Shortface Lanx *Fisherola nuttalli*^a
 Banbury Springs Limpet *Lanx sp.* [undescribed]^a
 Snake River Physa *Physa natricina*^a

Arachnids

A Cave Obligate Harvestman *Speleomaster lexi*

Insects

A Mayfly *Centroptilum selanderorum*
 A Mayfly *Paraleptophlebia jensenii*^a
 A Mayfly *Asioplax edmundsi*^a
 A Stonefly *Utacapnia nedia*^a
 A Tiger Beetle *Cicindela plutonica*^a
 Bruneau Tiger Beetle *Cicindela waynei*^a
 Blind Cave Leiodid Beetle *Glacicavicolabathyscioides*

^a Species for which the Owyhee Uplands represents a significant portion of their Idaho range.

Habitats in the Owyhee Uplands

| HABITATS | AREA (km ²) | AREA (ac) | PERCENT |
|-------------------------------------|-------------------------|-----------|---------|
| Urban | 564 | 139,421 | 2 |
| Arableland | 5019 | 1,240,265 | 15 |
| Non-native Herbaceous | 4649 | 1,148,779 | 13 |
| Upland Deciduous Forest | 42 | 10,279 | <1 |
| Southern Woodland | 1843 | 455,435 | 5 |
| Dry Conifer Forest | 114 | 28,105 | <1 |
| Mesic Deciduous Shrubland | 265 | 65,471 | 1 |
| Southern Xeric Shrubland and Steppe | 21,329 | 5,270,516 | 62 |
| Dry Grassland | 80 | 19,682 | <1 |
| Open Water | 182 | 44,968 | 1 |
| Southern Wetland | 84 | 20,866 | <1 |
| Riparian Woodland | 252 | 62,288 | 1 |

| HABITATS | AREA (km ²) | AREA (ac) | PERCENT |
|----------------------------|-------------------------|------------------|------------|
| Dune, Canyon, and Rockland | 45 | 11,084 | <1 |
| Total | 34,468 | 8,517,159 | 100 |

Table 18: Owyhee Uplands Habitats

Priority Habitats and Associated Vertebrate Species in the Owyhee Uplands

Arableland

Fishes

- White Sturgeon (Snake River system) *Acipenser transmontanus*
- Leopard Dace *Rhinichthys falcatus*
- Umatilla Dace *Rhinichthys umatilla*
- Inland Redband Trout *Oncorhynchus mykiss gairdneri*
- Shoshone Sculpin *Cottus greenei*
- Wood River Sculpin *Cottus leiopomus*

Amphibians

- Columbia Spotted Frog (populations south of the Snake River) *Rana luteiventris*
- Northern Leopard Frog *Rana pipiens*

Birds

- Northern Pintail *Anas acuta*
- Hooded Merganser *Lophodytes cucullatus*
- Greater Sage-Grouse *Centrocercus urophasianus*
- Sharp-tailed Grouse *Tympanuchus phasianellus*
- Black-crowned Night-Heron *Nycticorax nycticorax*
- White-faced Ibis *Plegadis chihi*
- Merlin *Falco columbarius*
- Long-billed Curlew *Numenius americanus*
- Franklin's Gull *Larus pipixcan*
- California Gull *Larus californicus*
- Burrowing Owl *Athene cunicularia*
- Blue Grosbeak *Passerina caerulea*

Mammals

- Coast Mole *Scapanus orarius*
- Townsend's Pocket Gopher *Thomomys townsendii*

Non-native Herbaceous

Fishes

Bull Trout *Salvelinus confluentus*
Shoshone Sculpin *Cottus greenei*
Wood River Sculpin *Cottus leiopomus*

Amphibians

Northern Leopard Frog *Rana pipiens*

Reptiles

Groundsnake *Sonora semiannulata*

Birds

Sharp-tailed Grouse *Tympanuchus phasianellus*
Merlin *Falco columbarius*
Peregrine Falcon *Falco peregrinus*
Long-billed Curlew *Numenius americanus*
Burrowing Owl *Athene cunicularia*
Grasshopper Sparrow *Ammodramus savannarum*
Blue Grosbeak *Passerina caerulea*

Mammals

Merriam's Shrew *Sorex merriami*
Coast Mole *Scapanus orarius*
California Myotis *Myotis californicus*
Townsend's Big-eared Bat *Corynorhinus townsendii*
Southern Idaho Ground Squirrel *Spermophilus brunneus endemicus*
Wyoming Ground Squirrel *Spermophilus elegans*
Townsend's Pocket Gopher *Thomomys townsendii*
Dark Kangaroo Mouse *Microdipodops megacephalus*
Bighorn Sheep (populations south of the Snake River) *Ovis canadensis*

Southern Xeric Shrubland and Steppe

Fishes

White Sturgeon (Snake River system) *Acipenser transmontanus*
Leopard Dace *Rhinichthys falcatus*
Umatilla Dace *Rhinichthys umatilla*
Inland Redband Trout *Oncorhynchus mykiss gairdneri*
Bull Trout *Salvelinus confluentus*
Shoshone Sculpin *Cottus greenei*

Wood River Sculpin *Cottus leiopomus*

Amphibians

Columbia Spotted Frog (populations south of the Snake River) *Rana luteiventris*
Northern Leopard Frog *Rana pipiens*

Reptiles

Great Basin Collared Lizard *Crotaphytus bicinctores*
Ring-necked Snake *Diadophis punctatus*
Long-nosed Snake *Rhinocheilus lecontei*
Groundsnake *Sonora semiannulata*

Birds

Greater Sage-Grouse *Centrocercus urophasianus*
Sharp-tailed Grouse *Tympanuchus phasianellus*
Mountain Quail *Oreortyx pictus*
Merlin *Falco columbarius*
Peregrine Falcon *Falco peregrinus*
Long-billed Curlew *Numenius americanus*
Burrowing Owl *Athene cunicularia*
Virginia's Warbler *Vermivora virginiae*
Grasshopper Sparrow *Ammodramus savannarum*
Blue Grosbeak *Passerina caerulea*
Lesser Goldfinch *Carduelis psaltria*

Mammals

Merriam's Shrew *Sorex merriami*
Coast Mole *Scapanus orarius*
California Myotis *Myotis californicus*
Fringed Myotis *Myotis thysanodes*
Spotted Bat *Euderma maculatum*
Townsend's Big-eared Bat *Corynorhinus townsendii*
Pygmy Rabbit *Brachylagus idahoensis*
Southern Idaho Ground Squirrel *Spermophilus brunneus endemicus*
Columbia Plateau Ground Squirrel *Spermophilus canus*
Wyoming Ground Squirrel *Spermophilus elegans*
Great Basin Ground Squirrel *Spermophilus mollis*
Dark Kangaroo Mouse *Microdipodops megacephalus*
Piñon Mouse *Peromyscus truei*
Gray Wolf *Canis lupus*

Bighorn Sheep (populations south of the Snake River) *Ovis canadensis*

Snake River Basalts

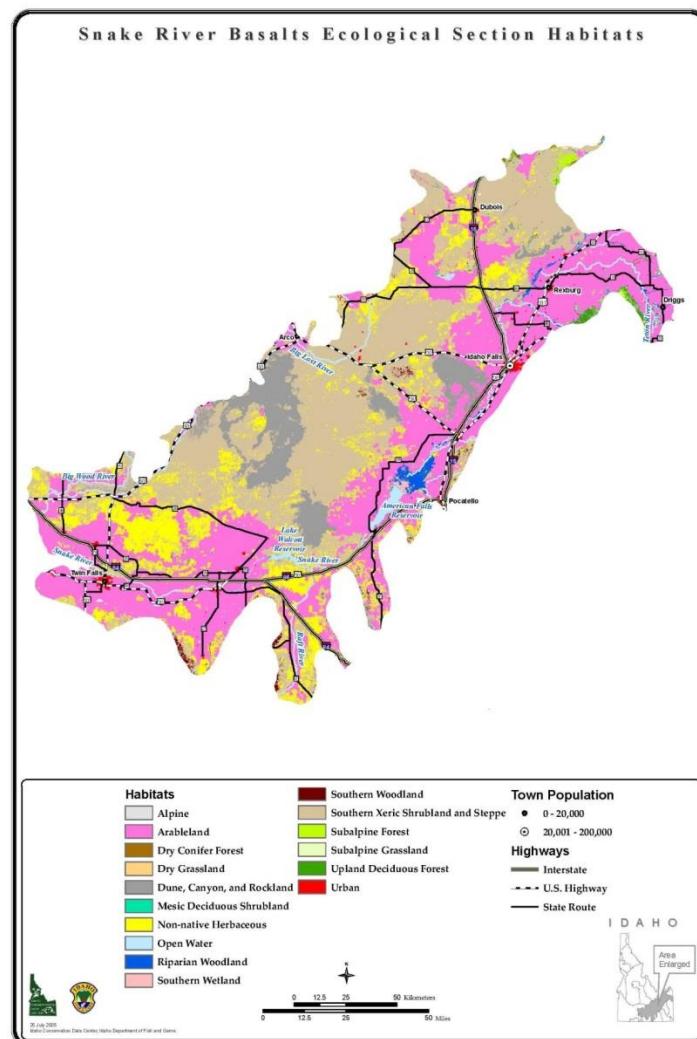
Ecological Section

The landscape comprises extensive plains, isolated buttes and block-faulted mountains. The surface is a lava plateau with a thin, windblown soil layer covering it. Lava flows prevalent throughout the area vary in thickness from less than 30 m (100 ft) to thousands of meters.

Shield volcanoes, cinder cones and lava ridges are common. Craters of the Moon National Monument is an example of the recent volcanic features. Elevation ranges from 900–2000 m (3000–6000 ft). The Snake River, American Falls Reservoir, Lake Walcott and Mud Lake are major water bodies. Few other perennial surface water bodies are present.

Precipitation ranges from 12–30 cm (5–12 in) annually and is evenly distributed throughout the fall, winter, and spring but is low in the summer. Precipitation during summer months is generally lost to evaporation. Average annual temperature ranges from 4–13°C (40–58°F). The growing season ranges from 60–165 days decreasing from west to east and with elevation. Enough precipitation falls in some foothills for dry farming.

Population centers include Idaho Falls and Pocatello and small communities are dispersed primarily along the Snake River corridor. Livestock grazing and dryland, and irrigated farming are the major land uses. Recreation is also important.



| LAND USE | AREA (ha) | AREA (ac) | PERCENT |
|---------------------|-----------|-----------|---------|
| Dryland Agriculture | 190,303 | 470,247 | 6 |
| Timberland | 39,429 | 97,432 | 1 |

| LAND USE | AREA (ha) | AREA (ac) | PERCENT |
|------------------------|------------------|------------------|------------|
| Irrigated–Gravity Flow | 517,322 | 1,278,325 | 16 |
| Irrigated–Sprinkler | 581,625 | 1,437,220 | 18 |
| Rangeland | 1,572,615 | 3,886,001 | 49 |
| Riparian | 46,064 | 113,825 | 1 |
| Rock | 220,470 | 544,790 | 7 |
| Urban | 38,406 | 94,904 | 1 |
| Water | 25,940 | 64,098 | 1 |
| Total | 3,232,174 | 7,986,843 | 100 |

| LAND OWNERSHIP | AREA (ha) | AREA (ac) | PERCENT |
|--------------------------------|------------------|------------------|------------|
| USDI Bureau of Land Management | 1,196,424 | 2,956,416 | 37 |
| USDI Bureau of Indian Affairs | 66,977 | 165,503 | 2 |
| USDI Bureau of Reclamation | 16,844 | 41,623 | 1 |
| US Department of Energy | 213,052 | 526,461 | 7 |
| USDA Forest Service | 32,890 | 81,272 | 1 |
| US Department of Defense | 574 | 1419 | <1 |
| USDI National Park Service | 18,430 | 45,542 | 1 |
| Open water | 36,841 | 91,037 | 1 |
| Private | 1,502,210 | 3,712,026 | 46 |
| State of Idaho | 138,180 | 341,450 | 4 |
| USDI Fish and Wildlife Service | 9751 | 24,095 | <1 |
| Total | 3,232,173 | 7,986,843 | 100 |

Table 19: Snake River Basalts Land Use and Land Ownership

Species of Greatest Conservation Need in the Snake River Basalts

Fishes

White Sturgeon (Snake River system) *Acipenser transmontanus*

Northern Leatherside Chub *Lepidomeda copei*

Bluehead Sucker *Catostomus discobolus*

Yellowstone Cutthroat Trout *Oncorhynchus clarkii bouvieri^a*

Inland Redband Trout *Oncorhynchus mykiss gairdneri*
Bull Trout *Salvelinus confluentus*
Shoshone Sculpin *Cottus greenei*^a
Wood River Sculpin *Cottus leiopomus*

Amphibians

Northern Leopard Frog *Rana pipiens*^a

Reptiles

Ring-necked Snake *Diadophis punctatus*

Birds

Trumpeter Swan *Cygnus buccinator*^a
Northern Pintail *Anas acuta*^a
Lesser Scaup *Aythya affinis*
Harlequin Duck *Histrionicus histrionicus*
Hooded Merganser *Lophodytes cucullatus*^a
Greater Sage-Grouse *Centrocercus urophasianus*^a
Sharp-tailed Grouse *Tympanuchus phasianellus*^a
Western Grebe *Aechmophorus occidentalis*^a
Clark's Grebe *Aechmophorus clarkii*^a
American White Pelican *Pelecanus erythrorhynchos*^a
Great Egret *Ardea alba*
Snowy Egret *Egretta thula*^a
Cattle Egret *Bubulcus ibis*
Black-crowned Night-Heron *Nycticorax nycticorax*^a
White-faced Ibis *Plegadis chihi*^a
Bald Eagle *Haliaeetus leucocephalus*
Swainson's Hawk *Buteo swainsoni*
Ferruginous Hawk *Buteo regalis*
Merlin *Falco columbarius*^a
Peregrine Falcon *Falco peregrinus*^a
Sandhill Crane *Grus canadensis*
Black-necked Stilt *Himantopus mexicanus*^a
American Avocet *Recurvirostra americana*^a
Long-billed Curlew *Numenius americanus*^a
Wilson's Phalarope *Phalaropus tricolor*^a
Franklin's Gull *Larus pipixcan*^a
California Gull *Larus californicus*^a
Caspian Tern *Sterna caspia*^a

Forster's Tern *Sterna forsteri*^a
Black Tern *Chlidonias niger*^a
Yellow-billed Cuckoo *Coccyzus americanus*^a
Burrowing Owl *Athene cunicularia*^a
Short-eared Owl *Asio flammeus*
Boreal Owl *Aegolius funereus*
Lewis's Woodpecker *Melanerpes lewis*
American Three-toed Woodpecker *Picoides dorsalis*
Pinyon Jay *Gymnorhinus cyanocephalus*
Juniper Titmouse *Baeolophus ridgwayi*
Virginia's Warbler *Vermivora virginiae*
Brewer's Sparrow *Spizella breweri*
Grasshopper Sparrow *Ammodramus savannarum*^a
Blue Grosbeak *Passerina caerulea*
Lesser Goldfinch *Carduelis psaltria*

Mammals

Merriam's Shrew *Sorex merriami*
Dwarf Shrew *Sorex nanus*
California Myotis *Myotis californicus*
Spotted Bat *Euderma maculatum*
Townsend's Big-eared Bat *Corynorhinus townsendii*^a
Pygmy Rabbit *Brachylagus idahoensis*^a
Cliff Chipmunk *Neotamias dorsalis*
Wyoming Ground Squirrel *Spermophilus elegans*^a
Great Basin Ground Squirrel *Spermophilus mollis*^a
Idaho Pocket Gopher *Thomomys idahoensis*^a
Townsend's Pocket Gopher *Thomomys townsendii*^a
Little Pocket Mouse *Perognathus longimembris*^a
Gray Wolf *Canis lupus*
Grizzly or Brown Bear *Ursus arctos*
Fisher *Martes pennanti*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*
Bighorn Sheep (populations south of the Snake River) *Ovis canadensis*

Bivalves

California Floater *Anodonta californiensis*
Western Ridged Mussel *Gonidea angulata*^a
Western Pearlshell *Margaritifera falcata*

Gastropods

Bliss Rapids Snail *Taylorconcha serpenticola*
Desert Valvata *Valvata utahensis*^a
Mountain Marshsnail *Stagnicola montanensis*
Shortface Lanx *Fisherola nuttalli*
Snake River Physa *Physa natricina*

Arachnids

A Cave Obligate Harvestman *Speleomaster lexi*^a

Insects

A Mayfly *Centroptilum selanderorum*^a
A Mayfly *Parameletus columbiae*
A Spur-throat Grasshopper *Melanoplus digitifer*
Idaho Point-headed Grasshopper *Acrolophitus pulchellus*
A Spring Stonefly *Malenka tina*
St. Anthony Dune Tiger Beetle *Cicindela arenicola*^a
A Tiger Beetle *Cicindela plutonica*
Blind Cave Leioidid Beetle *Glacicavicolabathyscioides*^a

^a Vertebrate species (except fishes) for which the Snake River Basalts represents a significant portion of their range.

Habitats in the Snake River Basalts

| HABITATS | AREA (km ²) | AREA (ac) | PERCENT |
|-------------------------------------|-------------------------|-----------|---------|
| Urban | 293 | 72,610 | 1 |
| Arableland | 12,372 | 3,057,126 | 38 |
| Non-native Herbaceous | 3799 | 939,030 | 12 |
| Upland Deciduous Forest | 117 | 29,037 | <1 |
| Southern Woodland | 139 | 34,320 | <1 |
| Dry Conifer Forest | 47 | 11,475 | <1 |
| Subalpine Forest | 84 | 20,755 | <1 |
| Mesic Deciduous Shrubland | 43 | 10,629 | <1 |
| Southern Xeric Shrubland and Steppe | 12,361 | 3,054,141 | 38 |

| HABITATS | AREA (km ²) | AREA (ac) | PERCENT |
|----------------------------|-------------------------|------------------|------------|
| Subalpine Grassland | 32 | 7940 | <1 |
| Open Water | 246 | 60,884 | 1 |
| Southern Wetland | 124 | 30,523 | <1 |
| Riparian Woodland | 362 | 89,629 | 1 |
| Dune, Canyon, and Rockland | 2287 | 565,213 | 7 |
| Total | 32,306 | 7,983,312 | 100 |

Table 20: Snake River Basalts Habitat

Priority Habitats and Associated Species in the Snake River Basalts

Arableland

Fishes

White Sturgeon (Snake River system) *Acipenser transmontanus*
 Northern Leatherside Chub *Lepidomeda copei*
 Yellowstone Cutthroat Trout *Oncorhynchus clarkii bouvieri*
 Inland Redband Trout *Oncorhynchus mykiss gairdneri*
 Bull Trout *Salvelinus confluentus*
 Shoshone Sculpin *Cottus greenei*
 Wood River Sculpin *Cottus leiopomus*

Amphibians

Northern Leopard Frog *Rana pipiens*

Birds

Northern Pintail *Anas acuta*
 Greater Sage-Grouse *Centrocercus urophasianus*
 Sharp-tailed Grouse *Tympanuchus phasianellus*
 Black-crowned Night-Heron *Nycticorax nycticorax*
 White-faced Ibis *Plegadis chihi*
 Merlin *Falco columbarius*
 Long-billed Curlew *Numenius americanus*
 Franklin's Gull *Larus pipixcan*
 California Gull *Larus californicus*
 Burrowing Owl *Athene cunicularia*
 Blue Grosbeak *Passerina caerulea*

Mammals

Wyoming Ground Squirrel *Spermophilus elegans*
Townsend's Pocket Gopher *Thomomys townsendii*

Non-native Herbaceous

Fishes

White Sturgeon (Snake River system) *Acipenser transmontanus*
Northern Leatherside Chub *Lepidomeda copei*
Yellowstone Cutthroat Trout *Oncorhynchus clarkii bouvieri*
Inland Redband Trout *Oncorhynchus mykiss gairdneri*
Bull Trout *Salvelinus confluentus*
Shoshone Sculpin *Cottus greenei*
Wood River Sculpin *Cottus leiopomus*

Amphibians

Northern Leopard Frog *Rana pipiens*

Birds

Sharp-tailed Grouse *Tympanuchus phasianellus*
Merlin *Falco columbarius*
Peregrine Falcon *Falco peregrinus*
Long-billed Curlew *Numenius americanus*
Burrowing Owl *Athene cunicularia*
Juniper Titmouse *Baeolophus ridgwayi*
Grasshopper Sparrow *Ammodramus savannarum*

Mammals

Merriam's Shrew *Sorex merriami*
Townsend's Big-eared Bat *Corynorhinus townsendii*
Wyoming Ground Squirrel *Spermophilus elegans*
Idaho Pocket Gopher *Thomomys idahoensis*
Townsend's Pocket Gopher *Thomomys townsendii*
Little Pocket Mouse *Perognathus longimembris*
Gray Wolf *Canis lupus*
Bighorn Sheep (populations south of the Snake River) *Ovis canadensis*

Southern Xeric Shrubland and Steppe

Fishes

White Sturgeon (Snake River system) *Acipenser transmontanus*
Northern Leatherside Chub *Lepidomeda copei*
Yellowstone Cutthroat Trout *Oncorhynchus clarkii bouvieri*
Inland Redband Trout *Oncorhynchus mykiss gairdneri*
Bull Trout *Salvelinus confluentus*
Shoshone Sculpin *Cottus greenei*
Wood River Sculpin *Cottus leiopomus*

Amphibians

Northern Leopard Frog *Rana pipiens*

Reptiles

Ring-necked Snake *Diadophis punctatus*

Birds

Greater Sage-Grouse *Centrocercus urophasianus*
Sharp-tailed Grouse *Tympanuchus phasianellus*
Merlin *Falco columbarius*
Peregrine Falcon *Falco peregrinus*
Long-billed Curlew *Numenius americanus*
Burrowing Owl *Athene cunicularia*
Pinyon Jay *Gymnorhinus cyanocephalus*
Juniper Titmouse *Baeolophus ridgwayi*
Virginia's Warbler *Vermivora virginiae*
Grasshopper Sparrow *Ammodramus savannarum*
Blue Grosbeak *Passerina caerulea*
Lesser Goldfinch *Carduelis psaltria*

Mammals

Merriam's Shrew *Sorex merriami*
Spotted Bat *Euderma maculatum*
Townsend's Big-eared Bat *Corynorhinus townsendii*
Pygmy Rabbit *Brachylagus idahoensis*
Wyoming Ground Squirrel *Spermophilus elegans*
Great Basin Ground Squirrel *Spermophilus mollis*
Idaho Pocket Gopher *Thomomys idahoensis*
Little Pocket Mouse *Perognathus longimembris*
Grizzly or Brown Bear *Ursus arctos*
Bighorn Sheep (populations south of the Snake River) *Ovis canadensis*

Dune, Canyon, and Rockland

Birds

Peregrine Falcon *Falco peregrinus*

Mammals

Townsend's Big-eared Bat *Corynorhinus townsendii*

Northwestern Basin and Range Ecological Section

This area is characterized by north-south trending mountain ranges and volcanic plateaus interspersed with broad, nearly level basins and valleys. The elevational range is 1200–2200 m (4000–7200 ft).

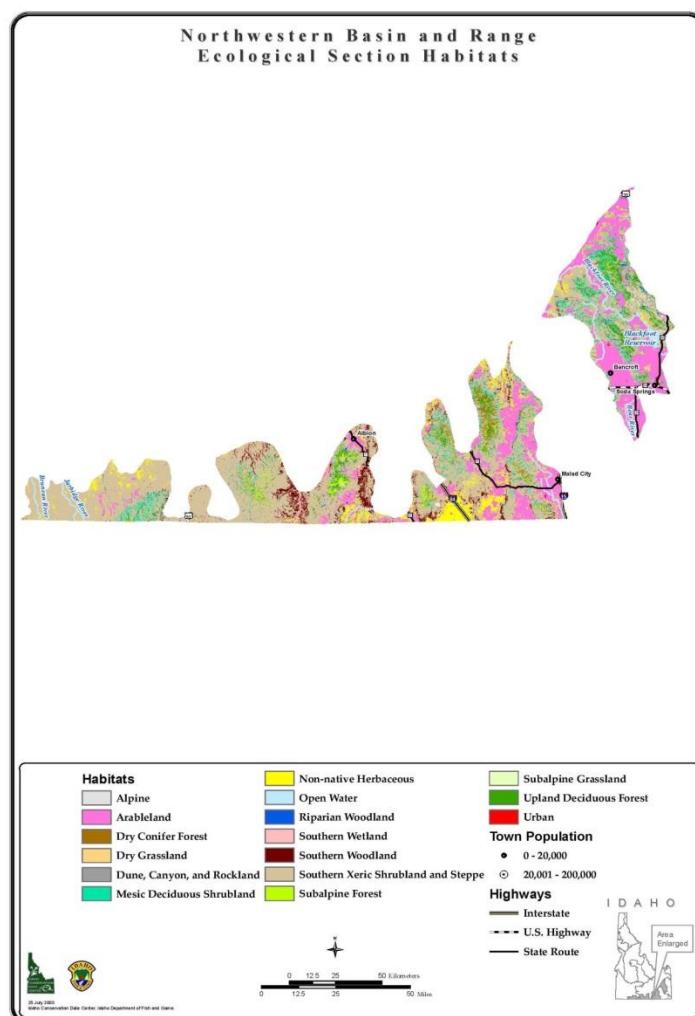
Large alluvial fans have developed at the mouths of most canyons, and playas and marshes occur in valleys and basins. Water is scarce except at higher elevations. Few streams are present, and groundwater is a major water source for agricultural and residential uses.

Summers are hot and dry, and winters are cold and dry.

Precipitation ranges from 10–79 cm (4–30 in) annually. Precipitation is evenly distributed throughout fall, winter, and spring. Average annual temperature is 5–10°C (41–50°F).

The growing season ranges from 30–140 days.

Residential communities are small and sparsely distributed. Livestock production is the primary land use. Mining occurs in some areas.



| LAND USE | AREA (ha) | AREA (ac) | PERCENT |
|---------------------|-----------|-----------|---------|
| Dryland Agriculture | 327,240 | 808,625 | 22 |

| LAND USE | AREA (ha) | AREA (ac) | PERCENT |
|--------------------------------|------------------|------------------|------------|
| Timberland | 212,263 | 524,511 | 14 |
| Irrigated–Gravity Flow | 38,687 | 95,596 | 3 |
| Irrigated–Sprinkler | 71,394 | 176,417 | 5 |
| Rangeland | 796,819 | 1,968,975 | 54 |
| Riparian | 14,603 | 36,084 | 1 |
| Urban | 8037 | 19,859 | 1 |
| Water | 7526 | 18,596 | 1 |
| Total | 1,476,567 | 3,648,662 | 100 |
| | | | |
| LAND OWNERSHIP | AREA (ha) | AREA (ac) | PERCENT |
| USDI Bureau of Land Management | 455,420 | 1,125,363 | 31 |
| USDI Bureau of Indian Affairs | 113,588 | 280,681 | 8 |
| USDA Forest Service | 227,170 | 561,346 | 15 |
| US Department of Defense | 189 | 468 | <1 |
| Open water | 9175 | 22,672 | 1 |
| Private | 577,226 | 1,426,352 | 39 |
| State of Idaho | 93,870 | 231,957 | 6 |
| Total | 1,476,639 | 3,648,840 | 100 |

Table 21: Northwestern Basin and Range Land Use and Land Ownership

Species of Greatest Conservation Need in the Northwestern Basin and Range

Fishes

- Leopard Dace *Rhinichthys falcatus*
- Umatilla Dace *Rhinichthys umatilla*
- Northern Leatherside Chub *Lepidomeda copei*^a
- Bluehead Sucker *Catostomus discobolus*^a
- Bonneville Cutthroat Trout *Oncorhynchus clarkii utah*
- Yellowstone Cutthroat Trout *Oncorhynchus clarkii bouvieri*^a
- Inland Redband Trout *Oncorhynchus mykiss gairdneri*
- Bull Trout *Salvelinus confluentus*

Amphibians

Columbia Spotted Frog (populations south of the Snake River) *Rana luteiventris*
Northern Leopard Frog *Rana pipiens*

Reptiles

Ring-necked Snake *Diadophis punctatus*

Birds

Trumpeter Swan *Cygnus buccinator*

Northern Pintail *Anas acuta*

Lesser Scaup *Aythya affinis*

Harlequin Duck *Histrionicus histrionicus*

Hooded Merganser *Lophodytes cucullatus*

Greater Sage-Grouse *Centrocercus urophasianus*^a

Sharp-tailed Grouse *Tympanuchus phasianellus*^a

Western Grebe *Aechmophorus occidentalis*

Clark's Grebe *Aechmophorus clarkii*

American White Pelican *Pelecanus erythrorhynchos*^a

Great Egret *Ardea alba*

Snowy Egret *Egretta thula*^a

Cattle Egret *Bubulcus ibis*

Black-crowned Night-Heron *Nycticorax nycticorax*^a

Bald Eagle *Haliaeetus leucocephalus*

Swainson's Hawk *Buteo swainsoni*

Ferruginous Hawk *Buteo regalis*^a

Merlin *Falco columbarius*^a

Peregrine Falcon *Falco peregrinus*

Sandhill Crane *Grus canadensis*

Black-necked Stilt *Himantopus mexicanus*

American Avocet *Recurvirostra americana*

Long-billed Curlew *Numenius americanus*^a

Wilson's Phalarope *Phalaropus tricolor*

Franklin's Gull *Larus pipixcan*

California Gull *Larus californicus*^a

Caspian Tern *Sterna caspia*

Yellow-billed Cuckoo *Coccyzus americanus*

Flammulated Owl *Otus flammeolus*

Burrowing Owl *Athene cunicularia*^a

Short-eared Owl *Asio flammeus*

Boreal Owl *Aegolius funereus*

Lewis's Woodpecker *Melanerpes lewis*

Pinyon Jay *Gymnorhinus cyanocephalus*^a
Juniper Titmouse *Baeolophus ridgwayi*^a
Virginia's Warbler *Vermivora virginiae*^a
Brewer's Sparrow *Spizella breweri*
Grasshopper Sparrow *Ammodramus savannarum*
Blue Grosbeak *Passerina caerulea*
South Hills Crossbill *Loxia* sp. [undescribed]^a
Lesser Goldfinch *Carduelis psaltria*^a

Mammals

Merriam's Shrew *Sorex merriami*^a
California Myotis *Myotis californicus*
Spotted Bat *Euderma maculatum*
Townsend's Big-eared Bat *Corynorhinus townsendii*
Pygmy Rabbit *Brachylagus idahoensis*
Cliff Chipmunk *Neotamias dorsalis*
Wyoming Ground Squirrel *Spermophilus elegans*
Great Basin Ground Squirrel *Spermophilus mollis*^a
Idaho Pocket Gopher *Thomomys idahoensis*
Townsend's Pocket Gopher *Thomomys townsendii*
Little Pocket Mouse *Perognathus longimembris*
Piñon Mouse *Peromyscus truei*^a
Kit Fox *Vulpes macrotis*
Wolverine *Gulo gulo*
Bighorn Sheep (populations south of the Snake River) *Ovis canadensis*

Gastropods

Green River Pebblesnail *Fluminicola coloradoensis*^a
Bear Lake Springsnail *Pyrgulopsis pilsbryana*
Mountain Marshsnail *Stagnicola montanensis*

Insects

A Mayfly *Centroptilum selanderorum*

^a Species for which the Northwestern Basin and Range represents a significant portion of their Idaho range.

Habitats in the Northwestern Basin and Range

| HABITAT | AREA (km ²) | AREA (ac) | PERCENT |
|-------------------------------------|-------------------------|------------------|------------|
| Urban | 35 | 8749 | <1 |
| Arableland | 3070 | 758,716 | 21 |
| Non-native Herbaceous | 785 | 193,976 | 5 |
| Upland Deciduous Forest | 556 | 137,324 | 4 |
| Southern Woodland | 554 | 136,804 | 4 |
| Dry Conifer Forest | 184 | 45,320 | 1 |
| Subalpine Forest | 177 | 43,809 | 1 |
| Mesic Deciduous Shrubland | 666 | 164,559 | 5 |
| Southern Xeric Shrubland and Steppe | 8367 | 2,067,387 | 57 |
| Dry Grassland | 24 | 5853 | <1 |
| Subalpine Grassland | 56 | 14,039 | <1 |
| Open Water | 81 | 19,976 | 1 |
| Southern Wetland | 29 | 7123 | <1 |
| Riparian Woodland | 169 | 41,437 | 1 |
| Total | 14,753 | 3,645,072 | 100 |

Table 22: Northwestern Basin and Range Habitats

Priority Habitats and Associated Vertebrate Species in the Northwestern Basin and Range

Arableland

Fishes

Bonneville Cutthroat Trout *Oncorhynchus clarkii utah*

Yellowstone Cutthroat Trout *Oncorhynchus clarkii bouvieri*

Amphibians

Northern Leopard Frog *Rana pipiens*

Birds

Northern Pintail *Anas acuta*

Greater Sage-Grouse *Centrocercus urophasianus*
Sharp-tailed Grouse *Tympanuchus phasianellus*
Black-crowned Night-Heron *Nycticorax nycticorax*
White-faced Ibis *Plegadis chihi*
Merlin *Falco columbarius*
Black-necked Stilt *Himantopus mexicanus*
Long-billed Curlew *Numenius americanus*
Franklin's Gull *Larus pipixcan*
California Gull *Larus californicus*
Burrowing Owl *Athene cunicularia*
Blue Grosbeak *Passerina caerulea*

Mammals

Wyoming Ground Squirrel *Spermophilus elegans*
Townsend's Pocket Gopher *Thomomys townsendii*

Non-native Herbaceous

Birds

Northern Pintail *Anas acuta*
Peregrine Falcon *Falco peregrinus*
Wilson's Phalarope *Phalaropus tricolor*
Grasshopper Sparrow *Ammodramus savannarum*
Blue Grosbeak *Passerina caerulea*

Mammals

Merriam's Shrew *Sorex merriami*
Townsend's Big-eared Bat *Corynorhinus townsendii*
Idaho Pocket Gopher *Thomomys idahoensis*
Townsend's Pocket Gopher *Thomomys townsendii*
Bighorn Sheep (populations south of the Snake River) *Ovis canadensis*

Mesic Deciduous Shrubland

Amphibians

Columbia Spotted Frog (populations south of the Snake River) *Rana luteiventris*

Birds

Blue Grosbeak *Passerina caerulea*

Mammals

Pygmy Rabbit *Brachylagus idahoensis*

Bighorn Sheep (populations south of the Snake River) *Ovis canadensis*

Southern Xeric Shrubland and Steppe

Fishes

Bluehead Sucker *Catostomus discobolus*

Bonneville Cutthroat Trout *Oncorhynchus clarkii utah*

Yellowstone Cutthroat Trout *Oncorhynchus clarkii bouvieri*

Inland Redband Trout *Oncorhynchus mykiss gairdneri*

Bull Trout *Salvelinus confluentus*

Amphibians

Columbia Spotted Frog (populations south of the Snake River) *Rana luteiventris*

Northern Leopard Frog *Rana pipiens*

Reptiles

Ring-necked Snake *Diadophis punctatus*

Birds

Greater Sage-Grouse *Centrocercus urophasianus*

Sharp-tailed Grouse *Tympanuchus phasianellus*

Merlin *Falco columbarius*

Peregrine Falcon *Falco peregrinus*

Long-billed Curlew *Numenius americanus*

Yellow-billed Cuckoo *Coccyzus americanus*

Burrowing Owl *Athene cunicularia*

Boreal Owl *Aegolius funereus*

Pinyon Jay *Gymnorhinus cyanocephalus*

Juniper Titmouse *Baeolophus ridgwayi*

Virginia's Warbler *Vermivora virginiae*

Grasshopper Sparrow *Ammodramus savannarum*

Lesser Goldfinch *Carduelis psaltria*

Mammals

Merriam's Shrew *Sorex merriami*

Spotted Bat *Euderma maculatum*

Townsend's Big-eared Bat *Corynorhinus townsendii*

Pygmy Rabbit *Brachylagus idahoensis*

Wyoming Ground Squirrel *Spermophilus elegans*
 Great Basin Ground Squirrel *Spermophilus mollis*
 Idaho Pocket Gopher *Thomomys idahoensis*
 Little Pocket Mouse *Perognathus longimembris*
 Piñon Mouse *Peromyscus truei*
 Kit Fox *Vulpes macrotis*
 Bighorn Sheep (populations south of the Snake River) *Ovis canadensis*

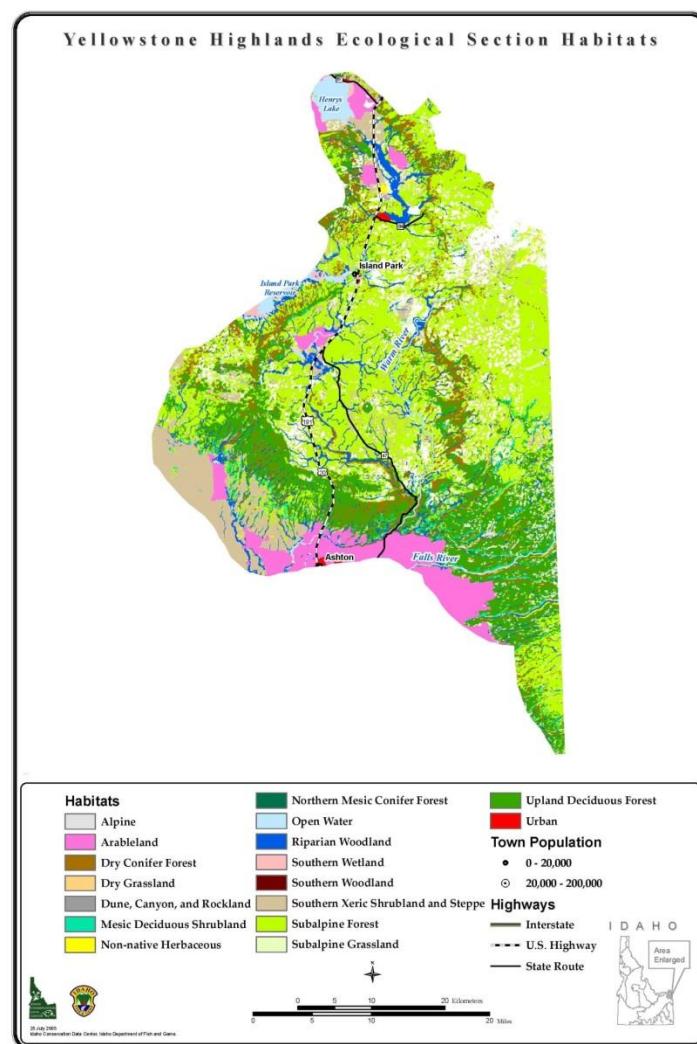
Utah-Wyoming Rock Mountain Ecoregion

Yellowstone Highlands Ecological Section

This area comprises the western margins of the Yellowstone Plateau. Much of this area has been glaciated and moraines are common.

Perennial streams, wet meadows and lakes are numerous and prevalent. Major water bodies include Henrys Lake, Henrys Fork of the Snake River and Island Park Reservoir. Elevation ranges from 1500–2500 m (5100–8500 ft). Soils in the basins and valleys are generally coarse and shallow to moderately deep.

Precipitation ranges from 51–114 cm (20–45 in) annually with most occurring during the fall, winter and spring. Precipitation occurs mostly as snow above 1800 m (6000 ft) and mostly as rain during the growing season. Climate is cold, moist continental. Temperature averages 2–8°C (35–47°F). The growing season lasts 25–120 days with a shorter growing season at higher elevations.



Communities are small and primarily scattered along the Henrys Fork. Recreation, timber harvest and livestock grazing are the dominant land uses. A small amount of forage and other crops are grown in some valleys.

| LAND USE | AREA (ha) | AREA (ac) | PERCENT |
|------------------------|----------------|----------------|------------|
| Dryland Agriculture | 2269 | 5607 | 1 |
| Timberland | 208,335 | 514,805 | 77 |
| Irrigated-Gravity Flow | 3687 | 9112 | 1 |
| Irrigated-Sprinkler | 10,827 | 26,755 | 4 |
| Rangeland | 34,583 | 85,455 | 13 |
| Riparian | 5598 | 13,834 | 2 |
| Urban | 190 | 469 | <1 |
| Water | 4943 | 12,215 | 2 |
| Total | 270,433 | 668,252 | 100 |

| LAND OWNERSHIP | AREA (ha) | AREA (ac) | PERCENT |
|--------------------------------|----------------|----------------|------------|
| USDI Bureau of Land Management | 7996 | 19,758 | 3 |
| USDI Bureau of Reclamation | 1693 | 4183 | 1 |
| USDA Forest Service | 178,850 | 441,946 | 66 |
| USDI National Park Service | 14,597 | 36,070 | 5 |
| Open water | 5815 | 14,370 | 2 |
| Private | 46,626 | 115,216 | 17 |
| State of Idaho | 15,018 | 37,110 | 6 |
| Total | 270,595 | 668,651 | 100 |

Table 23: Yellowstone Highlands Land Use and Ownership

Species of Greatest Conservation Need in the Yellowstone Highlands

Fishes

Bluehead Sucker *Catostomus discobolus*^a

Yellowstone Cutthroat Trout *Oncorhynchus clarkii bouvieri*

Amphibians

Northern Leopard Frog *Rana pipiens*

Birds

Trumpeter Swan *Cygnus buccinator*^a
Northern Pintail *Anas acuta*
Lesser Scaup *Aythya affinis*
Harlequin Duck *Histrionicus histrionicus*
Hooded Merganser *Lophodytes cucullatus*
Greater Sage-Grouse *Centrocercus urophasianus*
Sharp-tailed Grouse *Tympanuchus phasianellus*
Common Loon *Gavia immer*
Red-necked Grebe *Podiceps grisegena*
Western Grebe *Aechmophorus occidentalis*
American White Pelican *Pelecanus erythrorhynchos*
Snowy Egret *Egretta thula*
Black-crowned Night-Heron *Nycticorax nycticorax*
White-faced Ibis *Plegadis chihi*
Bald Eagle *Haliaeetus leucocephalus*
Swainson's Hawk *Buteo swainsoni*
Ferruginous Hawk *Buteo regalis*
Merlin *Falco columbarius*
Peregrine Falcon *Falco peregrinus*
Sandhill Crane *Grus canadensis*
American Avocet *Recurvirostra americana*
Long-billed Curlew *Numenius americanus*
Wilson's Phalarope *Phalaropus tricolor*
Franklin's Gull *Larus pipixcan*
California Gull *Larus californicus*
Caspian Tern *Sterna caspia*
Forster's Tern *Sterna forsteri*
Black Tern *Chlidonias niger*
Yellow-billed Cuckoo *Coccyzus americanus*
Flammulated Owl *Otus flammeolus*
Burrowing Owl *Athene cunicularia*
Short-eared Owl *Asio flammeus*
Boreal Owl *Aegolius funereus*
Lewis's Woodpecker *Melanerpes lewis*
American Three-toed Woodpecker *Picoides dorsalis*
Brewer's Sparrow *Spizella breweri*
Grasshopper Sparrow *Ammodramus savannarum*

Mammals

Merriam's Shrew *Sorex merriami*
 Dwarf Shrew *Sorex nanus*
 Townsend's Big-eared Bat *Corynorhinus townsendii*
 Pygmy Rabbit *Brachylagus idahoensis*
 Wyoming Ground Squirrel *Spermophilus elegans*
 Great Basin Ground Squirrel *Spermophilus mollis*
 Idaho Pocket Gopher *Thomomys idahoensis*
 Gray Wolf *Canis lupus*
 Grizzly or Brown Bear *Ursus arctos*^a
 Fisher *Martes pennanti*
 Wolverine *Gulo gulo*
 Canada Lynx *Lynx canadensis*
 Mountain Goat *Oreamnos americanus*

Gastropods

Rustic Pondsail *Stagnicola hinkleyi*^a

Insects

A Mayfly *Ameletus sparsatus*
 Gillette's Checkerspot *Euphydryas gillettii*

^a Vertebrate species for which the Yellowstone Highlands represents a significant portion of their range.

Habitats in the Yellowstone Highlands

| Habitat | Area (km ²) | Area (ac) | Percent |
|-------------------------------------|-------------------------|-----------|---------|
| Urban | 6 | 1380 | <1 |
| Arableland | 191 | 47,075 | 8 |
| Non-native Herbaceous | 12 | 2897 | <1 |
| Upland Deciduous Forest | 479 | 118,349 | 19 |
| Dry Conifer Forest | 196 | 48,531 | 8 |
| Subalpine Forest | 985 | 243,543 | 39 |
| Mesic Deciduous Shrubland | 50 | 12,476 | 2 |
| Southern Xeric Shrubland and Steppe | 269 | 66,451 | 11 |
| Dry Grassland | 5 | 1146 | <1 |

| Habitat | Area (km ²) | Area (ac) | Percent |
|---------------------|-------------------------|----------------|------------|
| Subalpine Grassland | 86 | 21,345 | 3 |
| Alpine | 25 | 6102 | 1 |
| Open Water | 42 | 10,481 | 2 |
| Southern Wetland | 8 | 2087 | <1 |
| Riparian Woodland | 170 | 41,913 | 7 |
| Total | 2524 | 623,776 | 100 |

Table 24: Yellowstone Highlands Habitats

Priority Habitats and Associated Vertebrate Species in the Yellowstone Highlands

Arableland

Fishes

Yellowstone Cutthroat Trout *Oncorhynchus clarkii bouvieri*

Birds

Trumpeter Swan *Cygnus buccinator*

Northern Pintail *Anas acuta*

Greater Sage-Grouse *Centrocercus urophasianus*

Sharp-tailed Grouse *Tympanuchus phasianellus*

Red-necked Grebe *Podiceps grisegena*

Black-crowned Night-Heron *Nycticorax nycticorax*

Long-billed Curlew *Numenius americanus*

Mammals

Wyoming Ground Squirrel *Spermophilus elegans*

Upland Deciduous Forest

Fishes

Yellowstone Cutthroat Trout *Oncorhynchus clarkii bouvieri*

Amphibians

Northern Leopard Frog *Rana pipiens*

Birds

Harlequin Duck *Histrionicus histrionicus*

Bald Eagle *Haliaeetus leucocephalus*

Peregrine Falcon *Falco peregrinus*
Yellow-billed Cuckoo *Coccyzus americanus*
Boreal Owl *Aegolius funereus*
American Three-toed Woodpecker *Picoides dorsalis*

Mammals

Townsend's Big-eared Bat *Corynorhinus townsendii*
Grizzly or Brown Bear *Ursus arctos*
Fisher *Martes pennanti*
Wolverine *Gulo gulo*

Dry Conifer Forest

Birds

Harlequin Duck *Histrionicus histrionicus*
Peregrine Falcon *Falco peregrinus*
Boreal Owl *Aegolius funereus*

Mammals

Townsend's Big-eared Bat *Corynorhinus townsendii*
Grizzly or Brown Bear *Ursus arctos*
Fisher *Martes pennanti*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*
Mountain Goat *Oreamnos americanus*

Subalpine Forest

Fishes

Yellowstone Cutthroat Trout *Oncorhynchus clarkii bouvieri*

Amphibians

Northern Leopard Frog *Rana pipiens*

Birds

Harlequin Duck *Histrionicus histrionicus*
Bald Eagle *Haliaeetus leucocephalus*
Peregrine Falcon *Falco peregrinus*
Boreal Owl *Aegolius funereus*
American Three-toed Woodpecker *Picoides dorsalis*

Mammals

Dwarf Shrew *Sorex nanus*
Townsend's Big-eared Bat *Corynorhinus townsendii*
Grizzly or Brown Bear *Ursus arctos*
Fisher *Martes pennanti*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*
Mountain Goat *Oreamnos americanus*

Riparian Woodland

Amphibians

Northern Leopard Frog *Rana pipiens*

Birds

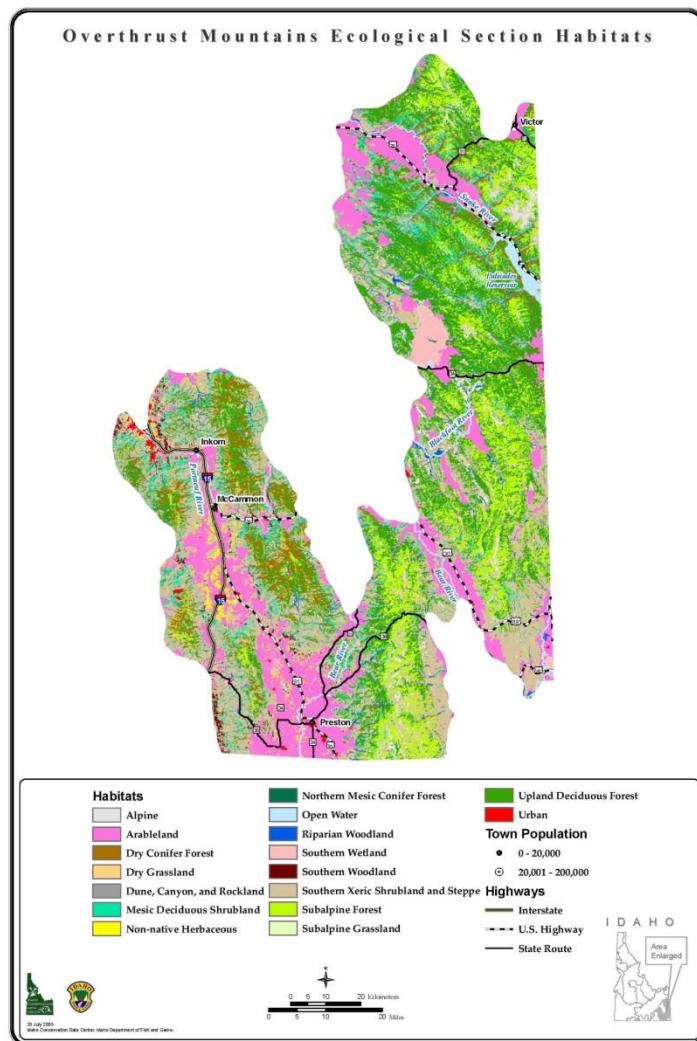
Trumpeter Swan *Cygnus buccinator*
Northern Pintail *Anas acuta*
Hooded Merganser *Lophodytes cucullatus*
Sharp-tailed Grouse *Tympanuchus phasianellus*
Snowy Egret *Egretta thula*
Black-crowned Night-Heron *Nycticorax nycticorax*
Bald Eagle *Haliaeetus leucocephalus*
California Gull *Larus californicus*
Yellow-billed Cuckoo *Coccyzus americanus*

Mammals

Dwarf Shrew *Sorex nanus*
Canada Lynx *Lynx canadensis*

Overthrust Mountains Ecological Section

Landscapes are characterized by minor mountain ranges and broad valleys. Mountain ranges include the Webster, Aspen, Portneuf, Bannock and Bear River Ranges. Linear valleys and ridges are the products of thrust faults. Rivers are of two major drainage basins flowing either into the Snake River or into the Great Salt Lake in Utah. Important rivers include the South Fork of the Snake River, the Portneuf River and the Bear River. A few lakes and wet meadows are associated with higher elevations above 1500 m (5000 ft). Large water bodies include Bear Lake and Palisades Reservoir. Elevation ranges from 1300–3000 m (4400 to 9900 ft). Sedimentary rock formations, such as limestones, siltstone, sandstones and shales are predominant.



Climate is influenced by prevailing winds and the general north–south orientation of the mountain ranges. Precipitation ranges from 40–100 cm (16–40 in) annually with most occurring during the fall, winter and spring. Precipitation occurs mostly as snow above 1800 m (6000 ft). The majority of precipitation falls as snow in the winter. Summers are dry. Annual average temperature is 2–10°C (35–50°F). The growing season lasts 80–120 days.

Population centers are primarily along the Portneuf and Bear Rivers and include Pocatello and Preston. Approximately 70% of the land is forested, and timber harvest, livestock grazing and recreation are major land uses. Phosphate mining is an important land use in some areas.

| LAND USE | AREA (ha) | AREA (ac) | PERCENT |
|------------------------|------------------|------------------|------------|
| Dryland Agriculture | 195,170 | 482,274 | 15 |
| Timberland | 558,545 | 1,380,188 | 42 |
| Irrigated–Gravity Flow | 62,632 | 154,766 | 5 |
| Irrigated–Sprinkler | 67,962 | 167,937 | 5 |
| Rangeland | 399,212 | 986,470 | 30 |
| Riparian | 23,317 | 57,617 | 23 |
| Urban | 8233 | 20,344 | 1 |
| Water | 6331 | 15,644 | <1 |
| Total | 1,321,401 | 3,265,241 | 122 |

| LAND OWNERSHIP | AREA (ha) | AREA (ac) | PERCENT |
|--------------------------------|------------------|------------------|------------|
| USDI Bureau of Land Management | 72,134 | 178,247 | 5 |
| USDI Bureau of Indian Affairs | 25,535 | 63,099 | 2 |
| USDI Bureau of Reclamation | 5936 | 14,668 | <1 |
| USDA Forest Service | 597,264 | 1,475,866 | 45 |
| Open water | 8853 | 21,877 | 1 |
| Private | 541,495 | 1,338,058 | 41 |
| State of Idaho | 65,489 | 161,826 | 5 |
| USDI Fish and Wildlife Service | 4871 | 12,037 | <1 |
| Total | 1,321,578 | 3,265,677 | 100 |

Table 25: Overthrust Mountains Land Use and Land Ownership

Species of Greatest Conservation Need in the Overthrust Mountains

Fishes

- Northern Leatherside Chub *Lepidomeda copei*^a
- Bluehead Sucker *Catostomus discobolus*^a
- Bonneville Cutthroat Trout *Oncorhynchus clarkii utah*^a
- Yellowstone Cutthroat Trout *Oncorhynchus clarkii bouvieri*^a

Amphibians

Northern Leopard Frog *Rana pipiens*^a

Reptiles

Ring-necked Snake *Diadophis punctatus*^a

Birds

Trumpeter Swan *Cygnus buccinator*^a

Northern Pintail *Anas acuta*

Lesser Scaup *Aythya affinis*

Harlequin Duck *Histrionicus histrionicus*

Hooded Merganser *Lophodytes cucullatus*

Greater Sage-Grouse *Centrocercus urophasianus*

Sharp-tailed Grouse *Tympanuchus phasianellus*^a

Red-necked Grebe *Podiceps grisegena*

Western Grebe *Aechmophorus occidentalis*

Clark's Grebe *Aechmophorus clarkii*

American White Pelican *Pelecanus erythrorhynchos*

Great Egret *Ardea alba*

Snowy Egret *Egretta thula*^a

Cattle Egret *Bubulcus ibis*^a

Black-crowned Night-Heron *Nycticorax nycticorax*^a

White-faced Ibis *Plegadis chihi*^a

Bald Eagle *Haliaeetus leucocephalus*

Swainson's Hawk *Buteo swainsoni*

Ferruginous Hawk *Buteo regalis*

Merlin *Falco columbarius*

Peregrine Falcon *Falco peregrinus*

Sandhill Crane *Grus canadensis*^a

Black-necked Stilt *Himantopus mexicanus*^a

American Avocet *Recurvirostra americana*^a

Long-billed Curlew *Numenius americanus*

Wilson's Phalarope *Phalaropus tricolor*^a

Franklin's Gull *Larus pipixcan*^a

California Gull *Larus californicus*

Caspian Tern *Sterna caspia*

Forster's Tern *Sterna forsteri*^a

Black Tern *Chlidonias niger*^a

Flammulated Owl *Otus flammeolus*

Burrowing Owl *Athene cunicularia*

Short-eared Owl *Asio flammeus*

Boreal Owl *Aegolius funereus*

Lewis's Woodpecker *Melanerpes lewis*
American Three-toed Woodpecker *Picoides dorsalis*
Pinyon Jay *Gymnorhinus cyanocephalus*^a
Juniper Titmouse *Baeolophus ridgwayi*^a
Virginia's Warbler *Vermivora virginiae*
Brewer's Sparrow *Spizella breweri*
Grasshopper Sparrow *Ammodramus savannarum*
Blue Grosbeak *Passerina caerulea*
Black Rosy-Finch *Leucosticte atrata*
Lesser Goldfinch *Carduelis psaltria*

Mammals

Merriam's Shrew *Sorex merriami*
Dwarf Shrew *Sorex nanus*
California Myotis *Myotis californicus*
Townsend's Big-eared Bat *Corynorhinus townsendii*
Pygmy Rabbit *Brachylagus idahoensis*
Cliff Chipmunk *Neotamias dorsalis*
Uinta Chipmunk *Neotamias umbrinus*
Wyoming Ground Squirrel *Spermophilus elegans*
Great Basin Ground Squirrel *Spermophilus mollis*
Rock Squirrel *Spermophilus variegatus*^a
Idaho Pocket Gopher *Thomomys idahoensis*^a
Townsend's Pocket Gopher *Thomomys townsendii*
Gray Wolf *Canis lupus*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*
Mountain Goat *Oreamnos americanus*

Bivalves

Western Pearlshell *Margaritifera falcata*

Gastropods
Bear Lake Springsnail *Pyrgulopsis pilsbryana*
Mountain Marshsnail *Stagnicola montanensis*
Cloaked Physa *Physa megalochlamys*^a
Thin-ribbed Mountainsnail *Oreohelix tenuistriata*^a

Insects

A Mayfly *Ameletus sparsatus*
A Spur-throat Grasshopper *Melanoplus digitifer*

A Stonefly *Sweltsa gaufini*^a
A Stonefly *Pictetiella expansa*
Relict Fritillary *Boloria kriemhild*^a
Gillette's Checkerspot *Euphydryas gillettii*

^a Vertebrate species for which the Overthrust Mountains represents a significant portion of their range.

Habitats in the Overthrust Mountains

| HABITAT | AREA (km ²) | AREA (ac) | PERCENT |
|-------------------------------------|-------------------------|------------------|------------|
| Urban | 62 | 15,377 | <1 |
| Arableland | 2284 | 564,455 | 17 |
| Non-native Herbaceous | 150 | 37,122 | 1 |
| Upland Deciduous Forest | 2768 | 684,154 | 21 |
| Southern Woodland | 102 | 25,205 | 1 |
| Dry Conifer Forest | 619 | 152,981 | 5 |
| Subalpine Forest | 1379 | 340,712 | 10 |
| Mesic Deciduous Shrubland | 832 | 205,704 | 6 |
| Southern Xeric Shrubland and Steppe | 4059 | 1,002,941 | 31 |
| Dry Grassland | 8 | 1870 | <1 |
| Subalpine Grassland | 300 | 74,144 | 2 |
| Alpine | 49 | 12,012 | <1 |
| Open Water | 88 | 21,669 | 1 |
| Southern Wetland | 151 | 37,283 | 1 |
| Riparian Woodland | 332 | 82,168 | 3 |
| Dune, Canyon, and Rockland | 7 | 1835 | <1 |
| Total | 13,190 | 3,259,632 | 100 |

Table 26: Overthrust Mountains Habitats

Priority Habitats and Associated Vertebrate Species in the Overthrust Mountains

Arableland

Fishes

Bonneville Cutthroat Trout *Oncorhynchus clarkii utah*

Yellowstone Cutthroat Trout *Oncorhynchus clarkii bouvieri*

Amphibians

Northern Leopard Frog *Rana pipiens*

Birds

Northern Pintail *Anas acuta*

Greater Sage-Grouse *Centrocercus urophasianus*

Sharp-tailed Grouse *Tympanuchus phasianellus*

Black-crowned Night-Heron *Nycticorax nycticorax*

White-faced Ibis *Plegadis chihi*

Merlin *Falco columbarius*

Long-billed Curlew *Numenius americanus*

Franklin's Gull *Larus pipixcan*

California Gull *Larus californicus*

Burrowing Owl *Athene cunicularia*

Mammals

Wyoming Ground Squirrel *Spermophilus elegans*

Townsend's Pocket Gopher *Thomomys townsendii*

Upland Deciduous Forest

Fishes

Northern Leatherside Chub *Lepidomeda copei*

Bonneville Cutthroat Trout *Oncorhynchus clarkii utah*

Yellowstone Cutthroat Trout *Oncorhynchus clarkii bouvieri*

Amphibians

Northern Leopard Frog *Rana pipiens*

Birds

Harlequin Duck *Histrionicus histrionicus*

Sharp-tailed Grouse *Tympanuchus phasianellus*

Bald Eagle *Haliaeetus leucocephalus*

Merlin *Falco columbarius*

Peregrine Falcon *Falco peregrinus*

Boreal Owl *Aegolius funereus*

American Three-toed Woodpecker *Picoides dorsalis*
Lesser Goldfinch *Carduelis psaltria*

Mammals

Townsend's Big-eared Bat *Corynorhinus townsendii*
Rock Squirrel *Spermophilus variegatus*
Wolverine *Gulo gulo*

Subalpine Forest

Birds

Harlequin Duck *Histrionicus histrionicus*
Bald Eagle *Haliaeetus leucocephalus*
Peregrine Falcon *Falco peregrinus*
Boreal Owl *Aegolius funereus*
American Three-toed Woodpecker *Picoides dorsalis*

Mammals

Dwarf Shrew *Sorex nanus*
Wolverine *Gulo gulo*
Mountain Goat *Oreamnos americanus*

Southern Xeric Shrubland and Steppe

Fishes

Northern Leatherside Chub *Lepidomeda copei*
Bluehead Sucker *Catostomus discobolus*
Bonneville Cutthroat Trout *Oncorhynchus clarkii utah*
Yellowstone Cutthroat Trout *Oncorhynchus clarkii bouvieri*

Amphibians

Northern Leopard Frog *Rana pipiens*

Reptiles

Ring-necked Snake *Diadophis punctatus*

Birds

Greater Sage-Grouse *Centrocercus urophasianus*
Sharp-tailed Grouse *Tympanuchus phasianellus*
Merlin *Falco columbarius*

Peregrine Falcon *Falco peregrinus*
Long-billed Curlew *Numenius americanus*
Yellow-billed Cuckoo *Coccyzus americanus*
Burrowing Owl *Athene cunicularia*
Pinyon Jay *Gymnorhinus cyanocephalus*
Juniper Titmouse *Baeolophus ridgwayi*
Virginia's Warbler *Vermivora virginiae*
Grasshopper Sparrow *Ammodramus savannarum*
Lesser Goldfinch *Carduelis psaltria*

Mammals

Merriam's Shrew *Sorex merriami*
Townsend's Big-eared Bat *Corynorhinus townsendii*
Pygmy Rabbit *Brachylagus idahoensis*
Wyoming Ground Squirrel *Spermophilus elegans*
Great Basin Ground Squirrel *Spermophilus mollis*
Rock Squirrel *Spermophilus variegatus*
Idaho Pocket Gopher *Thomomys idahoensis*

Southern Wetland

Birds

Trumpeter Swan *Cygnus buccinator*
Northern Pintail *Anas acuta*
Hooded Merganser *Lophodytes cucullatus*
Western Grebe *Aechmophorus occidentalis*
Clark's Grebe *Aechmophorus clarkii*
American White Pelican *Pelecanus erythrorhynchos*
Snowy Egret *Egretta thula*
Cattle Egret *Bubulcus ibis*
Black-crowned Night-Heron *Nycticorax nycticorax*
White-faced Ibis *Plegadis chihi*
Black-necked Stilt *Himantopus mexicanus*
American Avocet *Recurvirostra americana*
Wilson's Phalarope *Phalaropus tricolor*
Franklin's Gull *Larus pipixcan*
California Gull *Larus californicus*
Forster's Tern *Sterna forsteri*
Black Tern *Chlidonias niger*

Wyoming Basin Ecoregion

Bear Lake Ecological Section

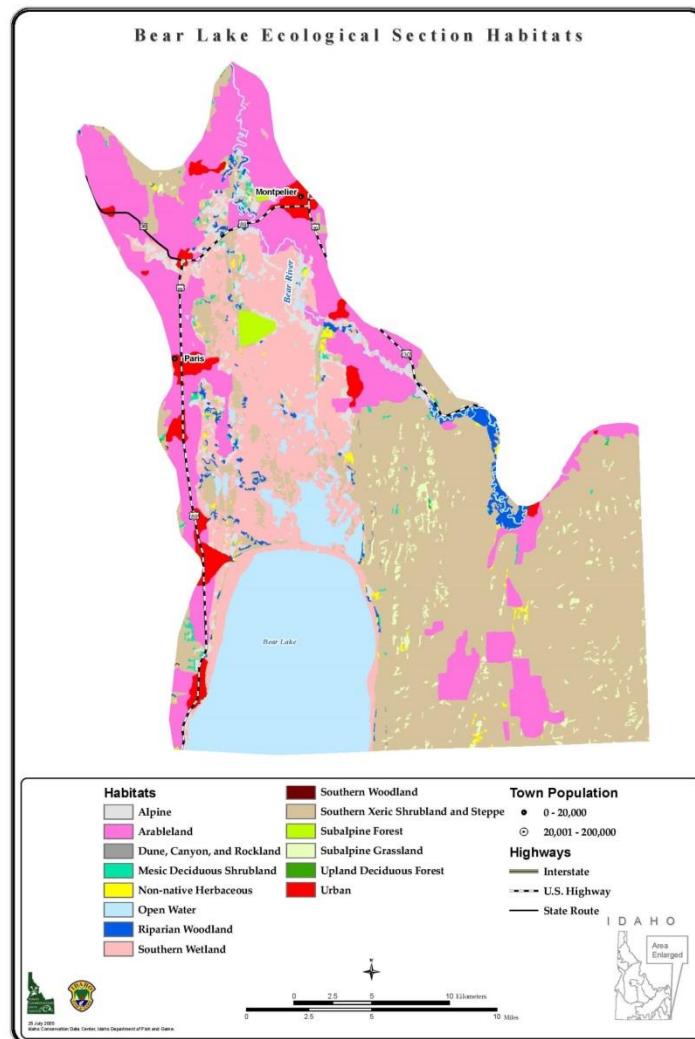
This section comprises Bear Lake, the Bear Lake Valley, dry hillsides and ridges to the east of the lake.

Bear Lake drains through Bear River, which is eventually a tributary of Great Salt Lake.

Elevations range from 1800–2400 m (5900–7800 ft).

Precipitation ranges from 40–100 cm (16 to 40 in) annually with most occurring during the fall, winter and spring. Precipitation occurs mostly as snow above 1800 m (6000 ft). Summers are dry with low humidity. Temperature averages 1–9°C (34–48°F). The growing season ranges from 50–180 days.

Livestock grazing, agriculture, and recreation are the primary land uses.



| LAND USE | AREA (ha) | AREA (ac) | PERCENT |
|------------------------|-----------|-----------|---------|
| Dryland Agriculture | 76,733 | 189,611 | 9 |
| Irrigated–Gravity Flow | 128,657 | 317,919 | 14 |
| Irrigated–Sprinkler | 162,328 | 401,121 | 18 |
| Rangeland | 305,917 | 755,937 | 34 |
| Riparian | 79,679 | 196,891 | 9 |

| LAND USE | AREA (ha) | AREA (ac) | PERCENT |
|--------------|----------------|------------------|------------|
| Urban | 3470 | 8575 | <1 |
| Water | 136,001 | 336,066 | 15 |
| Total | 892,785 | 2,206,120 | 100 |

| LAND OWNERSHIP | AREA (ha) | AREA (ac) | PERCENT |
|--------------------------------|----------------|------------------|------------|
| USDI Bureau of Land Management | 130,630 | 322,794 | 15 |
| Open water | 141,340 | 349,260 | 16 |
| Private | 533,317 | 1,317,856 | 60 |
| State of Idaho | 18,557 | 45,855 | 2 |
| USDI Fish and Wildlife Service | 68,694 | 169,747 | 8 |
| Total | 892,539 | 2,205,511 | 100 |

Table 27: Bear Lake Land Use and Land Ownership

Species of Greatest Conservation Need in the Bear Lake

Fishes

Bonneville Cutthroat Trout *Oncorhynchus clarkii utah*^a
 Bear Lake Whitefish *Prosopium abyssicola*^a
 Bonneville Cisco *Prosopium gemmifer*^a
 Bonneville Whitefish *Prosopium spilonotus*^a
 Bear Lake Sculpin *Cottus extensus*^a

Amphibians

Northern Leopard Frog *Rana pipiens*

Birds

Trumpeter Swan *Cygnus buccinator*^a
 Northern Pintail *Anas acuta*
 Greater Sage-Grouse *Centrocercus urophasianus*
 Sharp-tailed Grouse *Tympanuchus phasianellus*
 Western Grebe *Aechmophorus occidentalis*^a
 Clark's Grebe *Aechmophorus clarkii*^a
 American White Pelican *Pelecanus erythrorhynchos*^a
 Great Egret *Ardea alba*
 Snowy Egret *Egretta thula*^a

Cattle Egret *Bubulcus ibis*
Black-crowned Night-Heron *Nycticorax nycticorax*
White-faced Ibis *Plegadis chihi*^a
Bald Eagle *Haliaeetus leucocephalus*
Swainson's Hawk *Buteo swainsoni*
Ferruginous Hawk *Buteo regalis*
Merlin *Falco columbarius*
Peregrine Falcon *Falco peregrinus*
Sandhill Crane *Grus canadensis*
Black-necked Stilt *Himantopus mexicanus*^a
American Avocet *Recurvirostra americana*^a
Long-billed Curlew *Numenius americanus*
Wilson's Phalarope *Phalaropus tricolor*^a
Franklin's Gull *Larus pipixcan*^a
California Gull *Larus californicus*
Caspian Tern *Sterna caspia*^a
Forster's Tern *Sterna forsteri*^a
Black Tern *Chlidonias niger*^a
Burrowing Owl *Athene cunicularia*
Short-eared Owl *Asio flammeus*
Virginia's Warbler *Vermivora virginiae*
Brewer's Sparrow *Spizella breweri*
Grasshopper Sparrow *Ammodramus savannarum*
Lesser Goldfinch *Carduelis psaltria*

Mammals

Merriam's Shrew *Sorex merriami*
Townsend's Big-eared Bat *Corynorhinus townsendii*
Wyoming Ground Squirrel *Spermophilus elegans*
Rock Squirrel *Spermophilus variegatus*
Idaho Pocket Gopher *Thomomys idahoensis*

Gastropods

Green River Pebblesnail *Fluminicola coloradoensis*
Bear Lake Springsnail *Pyrgulopsis pilsbryana*^a

^a Species for which the Bear Lake represents a significant portion of their Idaho range.

Habitats in the Bear Lake

| HABITAT | AREA (km ²) | AREA (ac) | PERCENT |
|-------------------------------------|-------------------------|----------------|------------|
| Urban | 22 | 5592 | 2 |
| Arableland | 182 | 44,984 | 21 |
| Non-native Herbaceous | 8 | 2023 | 1 |
| Southern Xeric Shrubland and Steppe | 355 | 87,672 | 40 |
| Subalpine Grassland | 16 | 3782 | 2 |
| Alpine | 22 | 5464 | 2 |
| Open Water | 146 | 36,147 | 16 |
| Southern Wetland | 123 | 30,377 | 14 |
| Riparian Woodland | 13 | 3342 | 1 |
| Total | 887 | 219,383 | 100 |

Table 28: Bear Lake Habitats

Priority Habitats and Associated Vertebrate Species in the Bear Lake

Arableland

Fishes

Bonneville Cutthroat Trout *Oncorhynchus clarkii utah*

Amphibians

Northern Leopard Frog *Rana pipiens*

Birds

Northern Pintail *Anas acuta*

Greater Sage-Grouse *Centrocercus urophasianus*

Sharp-tailed Grouse *Tympanuchus phasianellus*

Black-crowned Night-Heron *Nycticorax nycticorax*

White-faced Ibis *Plegadis chihi*

Merlin *Falco columbarius*

Long-billed Curlew *Numenius americanus*

Franklin's Gull *Larus pipixcan*

California Gull *Larus californicus*

Burrowing Owl *Athene cunicularia*

Mammals

Wyoming Ground Squirrel *Spermophilus elegans*

Southern Xeric Shrubland and Steppe

Fishes

Bear Lake Whitefish *Prosopium abyssicola*

Bonneville Cisco *Prosopium gemmifer*

Bonneville Whitefish *Prosopium spilonotus*

Bear Lake Sculpin *Cottus extensus*

Amphibians

Northern Leopard Frog *Rana pipiens*

Birds

Greater Sage-Grouse *Centrocercus urophasianus*

Sharp-tailed Grouse *Tympanuchus phasianellus*

Merlin *Falco columbarius*

Peregrine Falcon *Falco peregrinus*

Long-billed Curlew *Numenius americanus*

Burrowing Owl *Athene cunicularia*

Grasshopper Sparrow *Ammodramus savannarum*

Lesser Goldfinch *Carduelis psaltria*

Mammals

Merriam's Shrew *Sorex merriami*

Townsend's Big-eared Bat *Corynorhinus townsendii*

Wyoming Ground Squirrel *Spermophilus elegans*

Rock Squirrel *Spermophilus variegatus*

Idaho Pocket Gopher *Thomomys idahoensis*

Open Water

Fishes

Bear Lake Whitefish *Prosopium abyssicola*

Bonneville Cisco *Prosopium gemmifer*

Bonneville Whitefish *Prosopium spilonotus*

Bear Lake Sculpin *Cottus extensus*

Birds

Trumpeter Swan *Cygnus buccinator*
Northern Pintail *Anas acuta*
Western Grebe *Aechmophorus occidentalis*
Clark's Grebe *Aechmophorus clarkii*
American White Pelican *Pelecanus erythrorhynchos*
Snowy Egret *Egretta thula*
Black-crowned Night-Heron *Nycticorax nycticorax*
White-faced Ibis *Plegadis chihi*
Black-necked Stilt *Himantopus mexicanus*
American Avocet *Recurvirostra americana*
Wilson's Phalarope *Phalaropus tricolor*
Franklin's Gull *Larus pipixcan*
California Gull *Larus californicus*
Caspian Tern *Sterna caspia*
Forster's Tern *Sterna forsteri*
Black Tern *Chlidonias niger*

Mammals

Townsend's Big-eared Bat *Corynorhinus townsendii*

Southern Wetland

Fishes

Bonneville Cutthroat Trout *Oncorhynchus clarkii utah*

Amphibians

Northern Leopard Frog *Rana pipiens*

Birds

Trumpeter Swan *Cygnus buccinator*
Northern Pintail *Anas acuta*
Western Grebe *Aechmophorus occidentalis*
Clark's Grebe *Aechmophorus clarkii*
American White Pelican *Pelecanus erythrorhynchos*
Snowy Egret *Egretta thula*
Black-crowned Night-Heron *Nycticorax nycticorax*
White-faced Ibis *Plegadis chihi*
Bald Eagle *Haliaeetus leucocephalus*
Merlin *Falco columbarius*
Peregrine Falcon *Falco peregrinus*

Black-necked Stilt *Himantopus mexicanus*
American Avocet *Recurvirostra americana*
Wilson's Phalarope *Phalaropus tricolor*
Franklin's Gull *Larus pipixcan*
California Gull *Larus californicus*
Caspian Tern *Sterna caspia*
Forster's Tern *Sterna forsteri*
Black Tern *Chlidonias niger*
Lesser Goldfinch *Carduelis psaltria*

Mammals

Townsend's Big-eared Bat *Corynorhinus townsendii*

Author:

Material for this chapter comes from Idaho's Comprehensive Wildlife Conservation Strategy (CWCS).

Rita Dixon

Zoologist, Conservation Data Center
Idaho Department of Fish and Game

Edited By:

Clella Steinke, Upper Snake Master Naturalist